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PCT/US00/34263

SEQ ID NO: of full- length nucleotide sequence	SEQ ID NO: of full- length peptide sequence	SEQ ID NO: of contig nucleotide sequence	SEQ ID NO: of contig peptide sequence	Priority docket number_ corresponding SEQ ID NO: in priority application	SEQ ID NO: in U.S.S.N. 09/488,725
1734	3520	5306	7092	784CIP2D_82	9857
1735	3521	5307	7093	784CIP2D_83	10010
1736	3522	5308	7094	784CIP2D_84	10011
1737	3523	5309	7095	784CIP2D_85	10052
1738	3524	5310	7096	784CIP2D_86	10057
1739	3525	5311	7097	784CIP2D_87	10085
1740	3526	5312	7098	784CIP2D_89	10139
1741	3527	5313	7099	784CIP2D_90	10142
1742	3528	5314	7100	784CIP2D_92	10165
1743	3529	5315	7101	784CIP2D_93	10173
1744	3530	5316	7102	784CIP2D_94	10173
1745	3531	5317	7103	784CIP2D_95	10273
1746	3532	5318	7104	784CIP2E_1	3121
1747	3533	5319	7105	784CIP2E_2	3628
1748	3534	5320	7106	784CIP2E_4	3673
1749	3535	5321	7107	784CIP2E_5	4018
1750	3536	5322	7108	784CIP2E_6	4497
1751	3537	5323	7109	784CIP2E_7	4865
1752	3538	5324	7110	784CIP2E_8	4916
1753	3539	5325	7111	784CIP2E_9	4923
1754	3540	5326	7112	784CIP2E_10	4926
1755	3541	5327	7113	784CIP2E_11	4962
1756	3542	5328	7114	784CIP2E_12	4963
1757	3543	5329	7115	784CIP2E_13	4964
1758	3544	5330	7116	784CIP2E_14	4988
1759	3545	5331	7117	784CIP2E_15	5835
1760	3546	5332	7118	784CIP2E_16	7682
1761	3547	5333	7119	784CIP2E_17	7682
1762	3548	5334	7120	784CIP2E_18	7699
1763	3549	5335	7121	784CIP2E_19	7707
1764	3550	5336	7122	784CIP2E_20	7707
1765	3551	5337	7123	784CIP2E_21	7752
1766	3552	5338	7124	784CIP2E_22	8357
1767	3553	5339	7125	784CIP2E_23	9065
1768	3554	5340	7126	784CIP2E_24	9324
1769	3555	5341	7127	784CIP2F_1	2976
1770	3556	5342	7128	784CIP2F_2	3589
1771	3557	5343	7129	784CIP2F_3	4021
1772	3558	5344	7130	784CIP2F_4	4474
1773	3559	5345	7131	784CIP2F_5	4566
1774	3560	5346	7132	784CIP2F_7	4705
1775	3561	5347	7133	784CIP2F_7	4707
1776	3562	5348	7134	784CIP2F_8	4712
1777	3563	5349	7135	784CIP2F_9	5008
1778	3564	5350	7136	784CIP2F_10	5009
1779	3565	5351	7137	784CIP2F_11	5015
1780	3566	5352	7138	784CIP2F_12	5015
1781	3567	5353	7139	784CIP2F_13	7724
1782	3568	5354	7140	784CIP2F_14	7725
1783	3569	5355	7141	784CIP2F_15	8828
1784	3570	5356	7142	784CIP2F_16	8830
1785	3571	5357	7143	784CIP2F_17	9739
1786	3572	5358	7144	784CIP2F_18	9896

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TABLE 7

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5359	337	1131	AHLSARLSALILDEVALIPAPONLSVLSTNMHLLZMSFVPIARG ETVYYSVEYQGEYESLYTSHIHIPFSSWCSLTGEGCDVTDITTA TVPVNLRVRLTASQTS/CLEHF/VSIPLIETQPSLPL/RMEI TKDGFHLVIELEDLGPQFEFLVATVRRREPQAEKHVMVRSGGIF VHLETHPEGAAYCVKAOTFFKAIGRYSATFQTECEVQGEATPL VIALFAPVGFMLILVVPLFVMKNGRLQ/YLLPLRGSSQTPK KITQF
5360	2	1115	PRVSSGGQBDPASPQWARRFPTQPSKMRNRVIAFPVSSVALK CVASHPRPDIWNEUDDQALTRPEAAEPKCKGWTLSLKNLRPED SGYTCVMSACAINATFYKVDVLTQRTASFPVLGHIPVNTTVV FGTTSFQCKVSDVKPQTQNLKRVYCAEGRNSITDVGQKF VVLPTQDVMSRPDGSYLMKLLITARQDDNGNYCLGANTMEYS FRSAFLTVLPDFKPGPPVASSSSATSLKPVFVITGPAGAVFII GTLMLLQQAQKKPTPAPAPFLPHGRPTGARDRSGCDKLPGL AALSAGPGVGLCEHGSFAAPQHLGPGFVAGPLKLYPLTYGHS TPIITYTHPPPSQQLNSHS
5361	3	925	HEGSISSANILLDDQPQKLTDFPAJAHFSLHEHQSCITMITS SSKHLVMPFEEYIQGKLSIKTDVYSFGIVIMVLAGCRVVLDD PKHQLRLDLRLREIMRGKGLDCLSLDKKVPCECPNFSAKLFCL AGRCACRAKLKPLSMDVILVLETSQASLYPAEDPPTSLSKFRFC FSPFLFLENVPSLPVDEDSQNNLLPSDEGLRIDRMTQKTFPEC SQSEVHPLSLDKKPSKRNDEACNMFSSSGESWFFKYIVPSQD LRLPVHLDPSSEAKHGSGRSPVSSSGSESWDEYEQYKKE SCQVEGCTTYSSSQSTGKHEKTAHPQYAKRQKSGKGA NMLATPMNGKFFVYPLSPVMSNPFYTSQKANGNPACSAQJQ VSPFIPPAHLASVSTFLLSSMSVIMPNITSDQKNEQGMCLCSQ MENLPSTALPAQMEDT/KTVLPLINDRGSFPFLSPARSSSIDL FSPSADSGTNSVFSQLENNTHYSQKIEGNTSSFLKNGNGENA VFPSPQVNVNNSFSTNAQGSAPKVKKDRGRGTGKRRKPKHINK RANVPAIIRDGKPICSRCRYAFINPRSLGHLHSKSYCKPLDGA ETAGELQLQNGQPSLASMILLSTNAVNLQPPQSTFNPACFPK PSFLQLLAENRSPALFENTFPFRSGVTNFTSVSOGSEIIIOAL ETAGIPSTTEGAEMLSHVSTGCVSDASQVNAVMPNPTVPPVLLH TVCHPFTLITNMKRTNSKTSISECSSLPVFPTNDLLKLTVEN GLCSSFPNSQGFQNFINSRSVSVISGFQNTSRSHLKNKGS ASKRKKVAPFLIAPASQNLVSTDLITKLLAKSVLPTNLLH SNVITPCEPQSLVENLTQKLVNVLQPLVITDVKENPKTSLBSHT VLAP/LTKTEGSDQMLVNSCTSVVNSDLQISEDNVIGNPEKT LEIITKAMNSQILLEVSGSGAGETSQNAQINYNQLPSVNTVQ NNKLPGDSFP/FSFSIVMPTESNIPSE/VSHKEDQIQEILEGL QKLENDLSTPASQCVLINTSVTLTPTPVKSTADITVIOQVSR MINIQPNDKVKPFVQCNQCNYSANTKDALFKHYGKIHQYTP MILEIKKQLKAPFKCVVPTCTKTFTRNLSRAHCOLVHEPTT BRMVKLKIKRPGYGRKSQSENVPSRSTQVKKQLANTENKRESQ PALSLRAETQNTHSNVAIPEKQLIEKKSPDKTESSLQIVTTS BOCNTNALTNTQTKGRKIRRRKSKSEKRRKKVPQSLEFFTRY SEYKPYRCVHQCPAAFTIQQMLHQAQVHKSDELPAFSAEVEE ESNGKSESEETKOTLKPRCQVSDCSRIQATIGLQHYWKL HENTPELESMIAVSDVQKFCQQLLEKSSPTTATVYHLEAD HIGLIRASKTBERGVYKCKDEGCDRIYACTRSHLLAHIPKHBNDK HKAHILRPRLTPQGENMSSKANQEKSKSKHGTGKARCKGEGE KMPKTKRKIKNLEKNKAKIVIERNKPYSLKRGHVSYIKARN DALSECTSRFVITQPCMIKGTCTSVTSESNIIIRHYCHKLSKAF TSOHRNLLIVFKCCNSOVKETSEQSGAKNDVKDSDTCVSESD NSRTATVYSQKEVEKNE*/DEMDLTLEFITKLINEDSTSVETQA NTSSNVSDPQKCNLCQSERQZANLKRNVKEKNVSQNKRRKVE KAPASAAELSSVKEEETAVAIQTEHSPASFDVSSFPKPGFE VSPLKFLERSAVKKNKNDRDHPITGNGKSGHNSRIGNDKTAV TSGNHVCPCKESETFVQFANPQLOQSDNVKIVLCKHILKCTEL
5362	2	4879	

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5363	8066	703	<p>VLRLQENKPTVSLKKLEVHSNDPMSVMDTSIGKATGREGY</p> <p>RLCCTGGGGTGGASGKRGPAATTSVLVLCIPSPVPFVFPFTLWP PPSWRRQPGGIRADFSRLRREANIVATCLFVRASLPHRINML RGGPGGLLLAVLCIGTAVPSTGASKSRQAQGMVQGPSVAVS KSPQGYDNGKHQYINQNERTYLGNALVCTCYGSGRGFNCSK PEASETCFDKTYTTRVSDTYERPKDSMWDCCTGAGRGKRS CTLANCRHEGGQSHKIGDWRPPEKCYMLKSCVCLGHGKGSW CKPLAEKCPDPAQTSYVCSGTEWKPQGMWDCCTCGESGR ITCTSRNCRNDQDTRTSYRIQDTSKCNKRNLCQICTANGRG EMKCRHSTSVQTS SGSGPFTDVRRAAVQOPHPQPPPTGHCT DSGVVYSVGMOLA*KTQGNKQMLCTCLGNGVSCQETAVTQYQ GNSHGEPCLVPFTYNGRTFYSCCTEGRGDGLHMCSTTSNYEQDQ KYSFCTDHTVLVQTRGNSNGALCHFPFLYNNHNYDCTSEGR DNMKNGCTQNYDADQKFGCPMAALIEICTNGBGVMRIGDQW DKQHDGMHMRCTCVNGRGWCTIAYSQLRDQCIVDDITYNVN DTHFRHEBGMNCTCFQGGGRNKCIPVDCQDSSTQFYQI GDSWEKYVHGVRQCTCYGRGIGENICCPLOTYPSGSGVEFVI TETPSQNSHPQKNAPQPSHISKYILWRNPNVSGRWKKEATIP GHLNSYTLGLKRPQVYSGQLISIQQGHGQVTRFDFTTSTST PYSWVVTGERTPSLVATSESVTSGTSSVYVSGASDV SGFRVEYELSEBGEPOYLPLSTATSVHNPDLAPRKYIVN VYQISEDGEQSLILSTQTPADPADEPTVDQVDTSTVVRNSR PQAPITGYRIVYSPVSGSTELNLPETAMGVTLSLQOPGVQYH ITYIAYENQESTPVVIOQETTGTPRSDTVPSPRDLQFEVITDV KVTIMNTPPESAVTGYRVDVIVNLPGEHQRLPLSRFT*AEIN TGLSPGVITYYKFAVSHORESKPLTACQTTKLDAPTNLQFVN ETDSTVLVRNTPPRAQITGYRLTVGLTRRGQPRQYVGVPSVKY PLRNLPQASEYTVSLVIAKNQESPKATGVFTTLQPGSSIPEYN TEVTETTIVTWPAPRIGFKLGVPRSQGGEAPREVTSDSGSIY VSGLTGPGVEYVYTIQVLRDQGRDAPIVNKLVTFLSPPTNLH LEANTPGVTLTVSKERS*TPDITGYRITTPYNGQGNLSLEEVY HADSSCTPDMLSEVGLLENVSVTVGDKESVPSDITLIPAV PPFTDLRTHV/LIGPDTWRVTVAPPSIDLNLVLRVSPVINE GRMLQSLSIFMLSN/AVULINLPLQTKYVVSSESVYHQESTP /LRGQKTKGLDSP/VTGIDFS/DITANSFT/VHN/IAPRA/TP TGYRIR/HHPEHF/SGRPREDR/VPHSRNSITLNLTPGTETVV SIVALNGRESPLLIQGOQTSVSDVPRDLVVAATPTSLLI/SMD APAVTVRYRITYGTGNGSPVQETVPGSKSTATISGLKPGVD YITIVYAVTGRGDSPASSKPIINHYREIDKPSQCMQVTDVQNS ISVKNLPGSSPVTYGYRVTTPKIKPGP/PKTKTAGPDOTEIT EGLQPTVEYVVSVYAQNPSEGSQPLQVATVNDPRFLGAFTDV DVDSDIKIAMESPQGVSKRYRTVSSPEDGIELHLPAPDGEZITA ELQGLRPGSEYTVSVVALHDDMSQPLIGTOSTAIPAPDILKPT QVTTLSAQFPFVGLTGYRVVTPHETCTHFKMKILADPS SVYVSGLMVATYSESVYALKOTLTSRPAQGVVTVLEIVSPR ARVDAITETITITIMRTKTETIGQFQ/DAVHNGQTPPQRTIKP DVSRYTITGLQPTDYKIYLYLMDNARSSPVIDASTADAPS NLRFLATTNSLNLVSNQPRARITGYILKYKPKGSPREVVPRP RPGVTEATITGLRGTETTYIVIALKNQKSEPLIGRKTDEL QLVTLPHNLHGPILLDVSTVQCTPFVTHPGYDTNGIQLPGT SQOQPSVGQOMIPEHGFRTTPPTATPIRHRPRYYPNVQGE ALSQTTISWAPQDTSYIISCHVQVDBEPLQFVRPGTSTSAT LTGLTRGATYNIIVALKDQGRHKVREVVTVGNS/NEGLNQPT DDSCFPDYTVSHYAVDDEWERSSES*KLQCLGLGSGSEPRCD SSRWCHDGVNYKIGENRDRGEGQGMSCCTCLNGKGEFKCDP HEATCTDYGKTYVSGQKQKYLGAICSKCTCHGGKGRCLNCR RKGES/SPSTTGOSTGQSYQRHYQRTYINVCPIECMFLDVC ADREGR</p>
5364	8066	703	<p>RLCCTGGGGTGGASGKRGPAATTSVLVLCIPSPVPFVFPFTLWP PPSWRRQPGGIRADFSRLRREANIVATCLFVRASLPHRINML RGGPGGLLLAVLCIGTAVPSTGASKSRQAQGMVQGPSVAVS</p>

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			QSKFGCYDNGKHQYQIQWERTYIGNALVCTCYGSSRGFNCESEK PEARETCFDKTYGNTYRVGDTYERPKDSMIWDCCTCIGAGRGRI CTIANRCHGGGQSYKIGDIWRRPHETGGYMLECVCLNGKGEWT CKPLAEKCFDHAAGTSYVVGSEWEKPYQGMWMDCTCLGSGSGR ICTSRBNKNDQDTYVSGDTWSKCKMRGLLOCTCYGSGR EKKCEHRTSVQTTSSGSGPFTDVRRAVYQPFQPFQPFQPFQPFQ DSGVVYSVGMQLA*KTQGNKQML\CTCLGNCVSCQETAVTQTYG GNSNGEPCVLPTNGETFYSCCTEGSRDGLWCSTTSNYSVEQDQ KYSFCTDHTYVQTRGGSNGALCHFFLYNNHNYTDCSTSEGR DNMKWGTQNTQYDADQKFGFCMAAHEICTTNEGVMYRIGDQW DEQHDGMIHMRCTCVNGORGEVCTCIAYSLRQDCIVDDITYNVN DTFKRHSRBMHINACTCFGQGRGWKCDPVDQDQDSETGTGYQI GDSWEKYVHGVRQCYCYGRGIGEWGQPLQTPYSSSGVEFVFI TETESQFNHPINNAFQPSHISKYILWRPNSVGRWKEATILP GHLNSTYIKGLKPGVYEGQLISIQQYGHQVETCFPDTFTTSTST PFTSWP\VTGERTFPSPVATSEBVEITASSFVYVSMVNASDTY SGFVYELSEBDEBQVILVSTASVW\TIDPLGRKRYTNN VQIISDCGQSLILSTSTOTTAEDAPDPDTGDDYDSTIVVGR PQAP\TGYRIVYSPVSEGSSTELMLPETANSVTLSELPQGVYN ETIIVAEENQESTPVVIQGETTGTPRSDTVPSPDLQFVEVTDV KVTIHWTFPESAVGYRVDVLPVNLPGSHOORILSRNTFAEN TGLSPGVITYYFKPAVSHGRSEKPLTAQOTT\LA\DAFTNLQFVN ETDSTVLVRNTPPRAQITGYRI\TVGLTRCQPRQYVQPSVSKY PLRNLQPASEYTVSLVAIKGQESPKATGVFTTLQPGSSIPFYN TEVTETITIVTWFAERLGLKLVPRSQGGEAFREVTSDSGSIV VSGLTDPGVYVYITQVLRDQGERDA\IVNR\VVTLSPPTNLH LEAHPTDGLVTSWERSTTDITGYRITITPTNCCQGNLSLEVY HADQSSCFIDNLEVEGLEYNVSYYTKDRESVFIESTIIPAV PPTDLRFTM\IIGPTMRTW\AFPSIDLNTFLVRSFVKNR GRMLQELSFIFLSN\VAVLTMLRCTEYVSVSSVYQESTP \LRQGRQIGLDSPTGIDPS\DTA\HSPT\WN\IAPRA\THI TGYRIR\HPEHF\SGRPREDR\VPHSRNSITL\TMLTGTGEYV SIVALNGRESEPLIQGQSTVSNDPRDLVVAATPTSLLI\SWD ADAVTYRYRITYGTEGNSFVQETPFGSKSTATISGLKPGVD YTIIVYAVTGRGDSPASSKPIINSYRTEIDKFSQMQVTDVQNS ISVKMLPSSSPVYGYRVT\KNGG\PTKIKTAGPDQTEMTI BGLQPTVEYVSVYTA\NESESQELVQATVNTIDRPKGLAFTDV DVDSIKIAWESPQGVSRVRYTSVSPEDGIELHFPAPDGEDTA ELQGLRPSSEYTVSVVADHDMESQPLIGTQSTALPAPTDLKPT QVTPSLSAQMTFPPNVQLTGKVRVTPKSKGMKEINLAPDSS SVVSGLMVATYR\SVIALKDKLTISRPAQGVVTLBNVSPPKR ARVDTATETITISNKTETITIGFOVDVNTAQGTQIRLIK DVESYITGLQGTGDKYLYLTIANENRASSPV\IDASTADA NLRPLATTNLSLVWQPPRARIYGYI\KYEKPGSPPRVVRP RPGVTEATTITGLEKTEVYTIIVIALKNNQSRPLIGRKKTDLP QIVTLPHENLHGPILLVPSYVQKTPFVTHPGYDTCNGIQLPGT SGQGPSVGQMIPEHGRKRTTPTTATP\IRHRPRPYPNVQCE ALSQTTISWAPQDTSYI\ISCHVGTDEEPLQFRVPGTSTSAT ITGLTRGATYNIIVRALDQQRHKVRREVTYVGNVNEGLNQPT DDSCDPYTVSHYVAGDEMERHSESGFKLLCQCLFGSGHPRCD SRWCHDNGVNYLIGSRWDRQGRNQMSCTCLGNGRGEFKCDP HEATCYDDGKTYHVGWQKCYLGAICSTCFQGRGWRCDNCR RKGESB\PGTITGOSYNOYSQRYHQRTNTNTNVCPEICFPNLDVQ ADRDSE
5365	8066	703	RLCTCGGSESTPGAGSKRGPAATISLVLCIPSVFPVFPFPLMP PFSWRQPGFGRADPSRKLRAEALVATCP\PRASLPHRLML RGCPFGILLVAVLCGLTAVPSTGASKSKQACQVQFQSPVAVS QSKPGCYDNGKHQYQIQWERTYIGNALVCTCYGSSRGFNCESEK PEARETCFDKTYGNTYRVGDTYERPKDSMIWDCCTCIGAGRGRI CTIANRCHGGGQSYKIGDIWRRPHETGGYMLECVCLNGKGEWT CKPLAEKCFDHAAGTSYVVGSEWEKPYQGMWMDCTCLGSGSGR

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			<p>ITCTSRNRCDQUTRTSYRIGDTWKKDNRLGQCITGNGRG EWKCRHRTSVQTTSSGSGPPTDVAAYVQPPHQPFPYGHCVT DSGVVSVGMQLA*KTQGNKQML\CTCLANGVSQCBTAVTQTYG GNSNGKPCVLPPTYNGRTFYSCTTGGQDGLWCSTTSNYEQDQ KYSFCTDHTVLVQTRGKNSGALCHFPFLVNNHMYTCTSEGR DNMKWGTQNYDADQKFGPCMAAHEICTTNEGVMYRIGDQW DKQHDGMHMRCTCVNGNGRGWCTCIAYSQRLDQCIVDDITYNN DTFHKRHEEGHMLNCTCFGQGRGWKCPDQDQDSEGTQTYQI GDSWEKYVGVRYQCYCYGRGIGEWHCQPLQTPYSSSGPVVEFI TETPSQNSHPIQNNAQPSHISKYILWRPNSVGRWKEATIP GHLNSTYIKGLKPGVYVEGQLISIQYQGHQVETPDPPTTSTST PVTNT\VTGETTTPSPLVATSESVTETASSFVSVWSASDVT SGFRVEYRLSEEGDEPQYVLPSTATSV\NIP\DLLPGRKYIVN VIQISEEDGEQSLILSTOTTAPDAPDPTVDQVDTISVVRNRS PQAPITGRIIVISPSVSGSTHEMLETANSV\TSLDQPGVQYNN ITI\AVENQESVTVIQRTGTGTSTPSPKDLQFVEVTDV KVTIWIHPESAVGRVYVDPVNLPSGHQDLSEMTPT\AEM TOLSPGVITYPKFVAVSHGRESKPLAQCTTK\LDAPTLQPVN ETDSTVLRNTPPRAQITGTYRLTVGLTRGQPCQYNGVSPVSKY FLRNLPQASEYTVSLVAIKGQNESPKATGVTTTLQPGSSIPPN TEVTETTIVTWPAPRIGFKLGRVPSQGEAPREVTSDSGSIV VSGLTGPGVYVYTIQVLRDQGERDAP\IVNK\VTTPLSPTNLH LEANNPTGVLTVSWERSTTDPITQVRIITTPPINGQGNLEEVV HADQSSCTF\DNIRVPEGLYNNVYTVKDDKESVPSDITIIPAV PFPDTRFTN\ILGPDTRMTVA\APPSIDTLNVLVYSPVQNE GRMLQSLIFPLSDN\AVVLNLLPGTETVSVSVSYQHESTP ILRRGRKGLDSPAIGDPS\DTIA\MSFT\VNH\IAPRA\TEI TOYRI\WHPBHF\SGRPREDA\VPBNSITLNLPTGTYVY SIVALKHREBSPLLQCSSTVSEVPRLVAPATPSLI\I\SWD APAVTVRYRTITYGTGNSPVQEPFTVDSGSTATTISLQKPGD YTIIVYAVTORGDSPASSKPSIIN\K\WILKPSQMVTDQDNS ISVKMLPSSSPVTVGRVTTT\PKNGPQ\PIKTKTAGPDQTEMTI RGLQPTVEYVUSVYQNPSSGSQLVQVATNIDRPKGLAFTDV DVDSIKIAMESPQQVSRVRYTVSSPRDGIHELFPAPDOBEDIA ELQGLRPGSEYTVSVV\ALHDMBSQPLIGTQSTA\PAPTDLKFT QVPT\TSLAQWTPN\QITGYRVKVP\KEKIGFMKEINLAPDSS SVVSGMLVATKYEVSVV\ALKD\TLTSRPAQGVTTLENVSPRR ARVTDATETITTI\SNRKTETCTIGFQVNDVANGOTPIORTIKP PVS\YTI\TGLQGTGTYKIYLYLNDNRSSSPVVIDASTAIDAPS NLRLACTPMSLVL\SWQPPRARTIGYII\IKYKPGSPPREVVPK RGVETATTITGLRPGTETITV\IALDNQKSEPLGRKKTDELS QLVTLPHENLHGPILLDVSTVQKTEFVTHPGVDTGANGIQLPCT SOQPSVSGQMI\PEHGRFRTPPTTATPIRHRPYPYENVGGE ALGQTTI\WAPFQDTSRYII\SCHFVGTDEEPLOFRVPTSTSAT LTGLTRGATYNI\VEALKDQQRHKVREVVTVGNSVHEGLNOPT DDSCFDPPTVSHYAVGDEWERMESGPKLLCCLGFGSGHFRCD SSRWCHDNGVNYKIGEKWDQGENGQMMSCCTCLGNGKGEFKCDP HEATCYDDGKTYVGEQWQKEYLGAICSCCTCFGGQGRWRCDNCR RPGRESPGCTTGQSNYQSRVYHQRI\NNVNCPIECFMPDLVQ ADRRDSRE</p>
5366	8066	703	<p>RLACTGGGBOTPCASGRGFAATISLVLCIPSPVFPFPFPLMP PPSNRRQPPGGIRDFSRRLRRKANVATCLPFRASLPHRLNML RGRGGLLLAV\CLGTAVHSTGASKSHHQQGNQVQPSFVAVS QSKGCTDKMKYQNGQWETVYLNAL\CTCTGSGRGNCSK PEAKETCPDKTYKNTYKVDGTYSER\KDMNIDCTYIGASRIS CTIANRCHGESQSYKIGDTHRRHSTGGYNYLCEVCLNGKGEVET CKPIAEKCFDHAAGTSYVVGETWEKPVQGMNV\CTCLGESGR ITCTSRNRCDQUTRTSYRIGDTWKKDNRLGQCITGNGRG EWKCRHRTSVQTTSSGSGPPTDVAAYVQPPHQPFPYGHCVT DSGVVSVGMQLA*KTQGNKQML\CTCLANGVSQCBTAVTQTYG GNSNGKPCVLPPTYNGRTFYSCTTGGQDGLWCSTTSNYEQDQ</p>

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *Stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
			<p>KYSFCNTHTVLVQTRGGNSGALCHFFFLYNNHNYTDCISEGR</p> <p>DMKMGCTTQNYDADQKFGFCPMOAHBICCTNENGVMYRICDQW</p> <p>DKQDMGHWMRCTCVNGRGSEWTCIAYSLQRDQCI VDDITYNVN</p> <p>DTFHKRHEGHWMAKCTCGSGRGRWCDPVQCCDSRGTFYQI</p> <p>GDSMEKTYVGVRYQCTCGKGIQGWKQPCITGVSSGQVYVFI</p> <p>TETPSQPNSHPIQNAQPSHISKYILRNPNFNSGVGRWKAIIIP</p> <p>GHLSYTIKGLKPGVVYBGLLISQQYGHQCVTRFDTTTSTST</p> <p>PVTNTVTGETTPTFSPLAVATSESVTEITASSFVSVWSASDTV</p> <p>SGFRVEYELSEBDEPQYLVLPSTATSVNIPDLLPGKRYIVN</p> <p>VYQISEDCQSLILSTQTTAPDAPDPTVDQVDDISIVVRKSR</p> <p>PQAPITGYRIVYSPVEGSSTEMLNPJTANSVTLSDLPQGVQYN</p> <p>ITIVAEENQESTPVVIOQETGTGPRSTVPSPRDLQFVEVTDV</p> <p>KVTIMTTPESAVTGYRVDPVPLVPEGHQRLLPSLRITFAEN</p> <p>TGLSPGVITYFKFAVSHGRESKPLTAQCTTKLIDAPTNIQFVN</p> <p>ETDSVTVVWTPPRAQITGVRLTVGLTRKGGFRQYVNGPSVSKY</p> <p>PLRLMQPASYVTSVIAKMGESPKATGVFTTLQPGSSIFPNY</p> <p>TEVTEITVITVPAPRIQGLVGVQSGQAPRSTSDSGSIV</p> <p>VSGITPGVYVVVTIQLRDQGERDPAIVNKKVITPLSPNLA</p> <p>LEANPDGTGLTVSNERSPTDITGYHITTTTNGQCNLSLEUV</p> <p>HADQSCCTFADNLEVPGLYVNSVTTVKDDKESVPSDITPIPAV</p> <p>PPPTDLRFTN/ILGPDTRVTHAPPSIDLTWFLVRYSVKNE</p> <p>GRMLQSLISIFLSDN/AVVLTNLLPGTEYVSVSVYQEHESTP</p> <p>/LRGRQXTGLDSPA/TGIDFS/DITA/NSFT/WHM/IAPRA/TP</p> <p>IGYRIR/HHPHF/SGRPREDR/VPHSRNSITL/TNLTPGTEYV</p> <p>SIVALNGREESPLLIGQCTSVSDVPRDLVVAATPSTLLT/SND</p> <p>ARAVTVRYRITYGTGTGNSPVQBPITVPQSGSTATISGLKPGVD</p> <p>YITTVYVATGREGSPASSKPI SINRYETIDKPSQGVIVDQONS</p> <p>ISVHMLPSSPVTGYRVITTT/PRNPGAPTRTKTAGPDQTEITI</p> <p>BGLQPTVEYVSVVACNPSGSCPLVQVATWIDRPGCLAFITD</p> <p>DVDSIKIAMESPOQGVSKRYVITYSSPEDGIELFAPDGERDPA</p> <p>ELCGLRPGSSYTVSVVALHDDMESQPLIGTQSTAIPTADTLKPT</p> <p>QVPTTSLSAQWTPPNVOLTGVRVTVPRKRTGPMKEINLAPDSS</p> <p>SVVVGSLMVAIKYVSVYALKDZTLSPRAGQGVITLENVSPRR</p> <p>ARVIDATEITITISWRTKTEITITGQVDAVPANGQTPICRTIKP</p> <p>DVESYTTITGLQPGTDYKILVLTINDNARSPPVINDASTADAPS</p> <p>NLREIATTNPSLLWSQPPRARITGYIIKYEKPGSPPREVVPRP</p> <p>RPQVTEATITGLEPGTTEITVYALQCNOKSEPLIGRKKTDLEP</p> <p>QLVTLPHNHLGPELIDVPSVTYQKTFVTHRGYDTNGGILQPGT</p> <p>SGQCTPSVGQCMIFEEHGRFRITTPPTATPIRHRPRPPYPPNVQGE</p> <p>ALSCITTSWAPFQTSSEYLLISCHPVGTDSEPLQFRVPGTSTSAT</p> <p>LPLTACATWILVIALDQQRHVEEIVYVWQTNVBLQNPQT</p> <p>DDSDCFDPTVSHYAVGDEWERNESQFKLLCCLGSGHGFCD</p> <p>SSRWCHDNGVNYKIGEKMDRQENQCNMCSCTLGNGKHEKCDP</p> <p>HSATCYDNGKTYHVGGEQWKEVGLAICSCCTCGGGRGWRCDNCR</p> <p>RPQGEPSPEGTGQSYNQYSQRYHQRTNTTNVNCIPCEFMPLDVQ</p> <p>ADREDSRE</p>
5367	235	3591	<p>KCIINMLCKKNIVIEYLADITLYSYLGFCSGIRKYLIHVLRL</p> <p>ILELNMTRCLLESKVS/LQYVALLVXILSNFPGKEMRHHITM</p> <p>VRMMRKQDS/RIVNGSEQQQLKELADVLMDFPDDQPGKELV</p> <p>KKSLDLEGDGLSNHLSASSTINPVLVGLQXPEMSLPVKPGQ</p> <p>GDSEASSPPTVADEDSVVPKSLTYLGCASVNAPESSVEALRNM</p> <p>SILRSQOQISLDVLTISVFNVSSEGI/VRLDPQNTREINANYPIKI</p> <p>LFVCHGHDGTPESDCFAPTESHYNAGLFRIHVRCEIGSAVSR</p> <p>IYGFATAFPRSAQCTPLSLADAPCTPDSOITFYSVSLIKEDDG</p> <p>KYVSAVDPKDDQPCFKRQGD/KIKYIVTWCQTNVBLAIBRCP</p> <p>GLLISPGKDVNDGNIELLDSKWSGSSDGSYVIGSWSPKPSH</p> <p>PQVNVNRTPKDKVLEMTAVDLNITVQBP/RLLEKTVRVCEP</p> <p>NERLFWPFSKRSITTENFLKIKQIKQREKKNNTDITVEVCLLES</p> <p>ESEREKRTTASPSVRI/PQSGSQSSVIPSPEDEDERNDNRLIL</p> <p>SGSGDVSKKCAEKILETNGELLSKNHNLNVRPKQLSSLVNNGV</p> <p>PEALRGVWQLLAGCHNDHLVKEVYILITKESPCDSATTRDIN</p>

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SBO ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid sequence containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *=Stop Codon, /=possible nucleotide deletion, \=possible nucleotide insertion)
			RTFAHDYFRDGGDQSDLYTKCAYSVYDSEIGYCGQGSFLA AVILLHMPBQAFSVLVKIMFDYGLRELKQNFEDLHCKFYOLE RLMQEYI PDLYNHFLD ISEAHNVASQWFLTLTAKFPLYVPH IIDLLLCBGISVIFNVALLGLLTKSKDILLITDFGALKFFRVQQL PKRYSSENAKMLMELACNMKISQKKLKKTEKSYHTMRQQAQV EPIEZFPERENRRLQANMRLQSDNDLHLELVTSKIALKRDLD NBSKADALWKLMLTKQKILDAEEKXRIEESHLLKAWTEKIR LDKASEIKKNSIIQDYKQCSQLESRLKQQTANKVETEKIR QKVDCCERCKREFPNKGRVKGISSTKVELDDEDEKETKKNOL RENELELAQTKA\QLVFEACKIQD\LEHPE*GLPFNEVQA\K KTFNRTLSSIKTATGVQCKETC
5368	573	2014	GAAGAADPRGSLGRTMLDFAVTFLLVGVAVIYLTPAS RQAAGIPGITEEKDGNLFDIVNSGSLHFLVNLHERYQPVVS FWPGRVLVSLQTVDLKQHINPKTLD/LF*NIAEVIKVSIV WMQCE*KP\QRKLLYENGVTDSIKSNFAILLKLPSEELDKNLSY PETQH\VELSQHMLGFAMKSVTQVMVSGTFEDDQGVIRPQKNG TVNSEIGKGLDGLSKDMTRKKOYEDALMOLESVLNRIKERR GRNPSGHIFDS.VQGNLNDQCILEDMSIPISASCIITAKLCTW AIVPLATSEVQKGLYKIMQVFNQAPVTEKIEQLRYCQVHGL FVFTAKPTFSAQLODEBKIIDEPIIDETLVLVALLVCADP NTVMSPHKFDPRDDELDWKTTFSSLOFSGTQCEPLAFNAVIT TVLISVLVKRLHLSVEQGVITETKYRLTSREAEITVSEKRY PRSLCFLWABAVALADGGLRRRRRLT.RGTMSASFVPMGLSLED CHCLPFLCADLGTGKWKVYVQGPSTADPLFVTEEDPILSSFS RCLKADVLG/VWRDQRPERRE\I*FWGGEDP/VILITPLMTY QKKMECGORMDEPMNAVLCFSKAVHNLRLERCIMRNFVRIGWF VPYKECKEPINKSEHLSCSFTFHLGDSNVCTSEVINGQPVVY LLSEBHITLAQSSNP*PQVILCPGLNGTLTQQAQFQSDATKK LIGEWKQFYPISCLCKENSZKQEDMDWEDDSIAAVEVIVAGVA MITYACFVLVQSDIPTPSVPGSTHCSSSLGVHQVPASTRDP MSVTLTPPTSPEEVUTVDQSVQKMKVPSVSDGNSDSTSHH QCKPKELAHNVDRVQWQCNHVAQNRKCYBASSGGLCREATA AKVASDFVEATORTKSCCLRHGGLKSNAGQOQAPGLGQQQ ILPHKHTNKQKSKHKPKRPLTPEHRSVSDDVQMD\ADE\A SQRLLV\ISAP\DSQ\VRFSNIR\TNDVAK\TPQGHGTGMANSPO PPPLSP\HPCDVEDGVTKT*STPQSQHFYQNPFTDPLVPSKPM EDRIDLSQSFPFQYQAEAVPTVYGTAVNLEEDRANIAMKYK FPKKDVBFLPQPLPSDKFDKDPVGPFGQESVTSVTELVMQCK PLKVSDELVOYQYIKNQCSL\AS\TADAEQEPKIDPYAVFQDEEF LPFDKKDRONSERAGKHKHVEDGTSVTVLSHEEDAMSLFSPS IKQDAPRPTSHARPSTSLITYSDSLAVSYTLDNLNFSNDEDEL PQSRKSANGSDDKACKSKSKTGNLDPLSCISTADLHKMYTPPS LEQHIMGPSPMNNNKKEYGSMDDTPGGTIVLGNSSSIIQAQFKIE VDEGFCSPKPSKIDPSVYKFPBQGLVGCMSMAFLKTLPSQY LHLLKLBECTYQSWVTKGLLSLBSGHSNPTKHTTBSSESA YQATVYTPQITTSYCGMPSPSAPPSNSGAILPSPSTPPTPTPT RTPTPRGAGGSPASQGSXYKENSILYSPASTPCTCRPLNVSP ATVPSIPEAHSLVYNLILSESVMNLFEDCNDSCECCVCNNXIX GAUVGVYIPDTQRAQYRCTCGFSAVNRKPFNNNSGLFEDEL IIGRNTDCCGKEARKFPALRAISAEHVNGGLKSEKSLDILL LQDQCTMLSPFGAADQDPPFKSGLISNVVRVERDCCNDCYLA LEHGRQFMNMSGGKVDKALVSCSLHPKSKRNDVNSQCSQDIL RMLLSLQPLQDAIQKRTVVRPWVGQPLTWQCFHOMAGRGSYG TDESPEPLPIPTFLGYDYDYLVLSPFALPYNERMLREPYQSOR DIAYVVLCPENKALINGAKSPFRDLITAIYKSRIGQHRPVRLL TKIIMRVSTASKKLSEKVAEMPSQADGNNEAFSLKLLIYAQV CKYILGPTLASLSDLSLSQLPNLVAPTQSILTPPQMTNTYGRNA NTPRATLASASTNVTSGVATSVTSVAVNPTKHTTBSSESA SNLANSVSNKLGDFPFPSKNNNSAAGGMSYNTANTVQSQGLQO QTSALQTAGAGSSSSLTQPHDPVYSSTMDRCXVIGTDDGSH AVTTPAIVVYIIPDPTTYNTDESTNSSSVWTLGLLRCPLHNVQ
5369	1	6622	

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			TLFPHIKSTVSVQIIPCOYLLOPVKIHEDREIYPQHLKSLAFSAF TQCRRLPTSTNVKLTITGPGGLAMETALRSDDRPECIRLYAPP FILAPVKDKQTELGETFGEAGQKYNLVFGVYCLSHDQRWILASC TDLYGBLLCTCIINIDVFNRRARRKSSARKPGQLQKLNWCLGLV QMSSELRVVIIGRLGRIGHGELKDWSCILSRNQLQSLSKLKD CMKCGLSAUSPILSACIYAMDPPQSGVDPDSVSTQSVGRS TFLAMQTSQINTPQDTSCTHILVPTSASTQVAGNPTTNLLD AFNPNMGADGAGIVDLDLTGDDLDPIILILPASPTSPVMS GSHYPHGGDAGKQGSTDRLLSTPEHEEVPIILQPLAGVTVST AKAGPLDPNMFASCPAQCYOCPFLFKASLHMHVPSVQSDRLHS KHSHPIDSNQTSVLRFLVLEQYNALSMLTCDPATQRRSCLEPIH FVVLINQLYNFIMNML
5370	1226	716	RWSKKLELRRAAQAATESRPPQSQBMPPTGKHVHALKRLDSAN ANDVTQVQLLEDGADPCVADDGRKRALHFASGKNDQIVQLLL DHGADPNQRDGLGNTPLHLAACTNHVPVITTLRGGARVDALDR AGRTPLHLAKSKLNLQEGHAQCLKAVR/HGGEADHPYAEVGSV APRAT*AAACSGVFPSRSLWGSAPMSRSSCTITNSLPLHAKCR AVRPLSSAAQGSAPSSSSCCTVTSLSLALAEISLFRACSLPVG GCTISWL
5371	1331	167	TANHLAKLLESQGCRLCSFIMMSAPKVPPLACTITVTTRQS SKENTRYEKLKVCSDIRKIRR*IKDGYP*RMKPLAKKRI/P LQELGADETAIVASILERCPAIVCSPTAVNTQRKLMQVCKNHE ELIKLEQFPESPFTIKDQENQKIANVQFQELGLQTVIARILIT AAPNVFHPVPEKNQKVRILQESTLDVCGSENMMKVLKLLSQ NPFILNPSPTAIKETLEFLQEGGFTSFELQLLSKLKPLPOLC PRSIQNSISPSINAFKCTDHLKQVLVKCPALLYSVFVLEERN QGLLRGISIAQIRETPMVLLETPQIVCYRIKLNSSGVRIKDG HLNHLNGSKKEFZANFGIKAKVRPLNPNVAPLNVE
5372	51	857	SPGQPTNAAPDWDPLFSAVQGDILHLALCFPCWILGKGM PLRLILLFVTELSGAHNTTVFQVAVGQSLQVSCPYDSMKHGR REAWCRLQGEKGPQCRVSTHLMWLLSLFRWNGSTAITDITLG GTLTITLRNLQPHDAGLVQCCLEGSADTLKAVLEVLADEPL HEUDGILAFV*LDLRASNMWSTASPAQKVCSEHSP,PSF SWPASPSRP*QZAPSGEQPMDRSQGHIPVWMTVANTQGIS KLQCG
5373	2814	346	VKTKTSIFNSAMQMBVYVENIRKKPQVFNHYSFPTPTFNSQY QMLDPTNPSAGTAKIDQEKVKLNFDMTASPKILMSKPVLSGG TGRRLISLSDMPSPMSTNSSVHTGSDVQDAEKKATSSHFSASE ESMDPLDKSTASPASTKIQAGSLGSGPKFPSPQLSAPITTKTD KTS*TGSLNLNLDLSKARMDKELSESVOQOSTPVPILSPKQ IRSRFQNLMDKTIESCQALGNEISDVYTAVESSDSSESEKS DSDSEYISDDBQKS*GTSQRCDETDKEGQMDKPSAVKKPKP TNPVEIKKELKSTSPASEKADPAVKDKASPEPEKDFSGKQKPS PHPIKDKLKGKDETOSPTVHLGLDSDSE*NLVIDLGEDHSGRE GRMKKCKKPSQKQVVGCTPSTTVGSHSPPTFVLTGSSAG TSAGKATTSISSVTTAPAPASVTPKQKPLVAF AVORSCTISSVQKQITQSPSTSTTLTPTSGSPHITDSQGM STVSSVNGDPLGTASADVADIATKYTSK\MDAOKTM\TEI YDLNKN\TTWQGLAKDSQGLRIRIEKLQMLHQRL\SEMKN LELTWAEWROSWEORDRLLAEVFKOLELEKQOAVDETCKQKWC ANFKKBAIFYCCNNTSYCDYPCQ\QAHVPH\MKSCCTGATAPQ \QZADAE\VNTEITLANKSSQSSSSQSPAPETASA\SKKEKTS EKESGSGSTLDLGSRETSPSTILGSGNQSDHRS\SNKSSWSS DEKRS\TRSDHN\TPSTQHGRSLLPQKESRAGFPFLGTSK
5374	2814	346	VKTKTSIFNSAMQMBVYVENIRKKPQVFNHYSFPTPTFNSQY QMLDPTNPSAGTAKIDQEKVKLNFDMTASPKILMSKPVLSGG TGRRLISLSDMPSPMSTNSSVHTGSDVQDAEKKATSSHFSASE ESMDPLDKSTASPASTKIQAGSLGSGPKFPSPQLSAPITTKTD KTS*TGSLNLNLDLSKARMDKELSESVOQOSTPVPILSPKQ IRSRFQNLMDKTIESCQALGNEISDVYTAVESSDSSESEKS DSDSEYISDDBQKS*GTSQRCDETDKEGQMDKPSAVKKPKP TNPVEIKKELKSTSPASEKADPAVKDKASPEPEKDFSGKQKPS PHPIKDKLKGKDETOSPTVHLGLDSDSE*NLVIDLGEDHSGRE GRMKKCKKPSQKQVVGCTPSTTVGSHSPPTFVLTGSSAG TSAGKATTSISSVTTAPAPASVTPKQKPLVAF AVORSCTISSVQKQITQSPSTSTTLTPTSGSPHITDSQGM STVSSVNGDPLGTASADVADIATKYTSK\MDAOKTM\TEI YDLNKN\TTWQGLAKDSQGLRIRIEKLQMLHQRL\SEMKN LELTWAEWROSWEORDRLLAEVFKOLELEKQOAVDETCKQKWC ANFKKBAIFYCCNNTSYCDYPCQ\QAHVPH\MKSCCTGATAPQ \QZADAE\VNTEITLANKSSQSSSSQSPAPETASA\SKKEKTS EKESGSGSTLDLGSRETSPSTILGSGNQSDHRS\SNKSSWSS DEKRS\TRSDHN\TPSTQHGRSLLPQKESRAGFPFLGTSK



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PCT/US00/34263

SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (D=Alanine, C=Cysteine, E=Aspartic Acid, G=Glutamic Acid, F=Phenylalanine, S=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, * =stop Codon, / =possible nucleotide deletion, \ =possible nucleotide insertion)
5375	2907	1116	<p>           TNVPEIKKEELKSTSPASEKADPGAVDCKASPEPEKDFSGKAKPS            PHPIKDKLKGKDDSTDSPTVHLGLSDSE\NELVIDLGEDHSGRE            GRNNKKEPKESPQKQDVVGKTPPSTTVGSHSPBTFVLTRSSAQ            TSAGAGATATTSSTSTVYTAPAPATNSPVLKQRLPLKETAIP            AVQDSQSTSTVQOKILTPGSPSTTILVTSPQSPPLTSSGSH            STLVSQVNDLPIPTASADVADIAKTVSKGLADAKZMTATEI            YNDLSKV\T\TWAKQLADESQGLRIETKQLQWQQLS\SEWKN            LBLTMAWRQSWQERDRLLAEVKKQLELEKQAVEBTKKQKWC            ANFKKALFYCCNWTISYCDYCP\QAHWFH\MKSCQSTATAPQ            \QADAE\VTNETLTKSSQSSSTSQSPSETASA\SEKETSA            EKSKEGSLTLGSGRETSPSILLGNSQSGHSH\SNKSSSSSS            DEKRS\TRSDH\TPSTQHSRLSLPGESRAGTPFLGTSK         </p>
5376	4504	591	<p>           HTPLATEPHLEKRCRGLPAMFAQPRLLSGSPQSPPTLTKES            RGLRQQTISVA\QSGAQAPGRNHRCAHCRHFGVVA\LWLSTR            KQQA\RGLPLCPCEGCRFRHAPFLALHRQVHAATPDWGFACI            LCGQSFGWVALVHLHRAHSAKAQPFACPKDARDAFWRKAAAS            SSILRKHPSRPRGPPFPFCGKQBSILPTMDQ\LVVAHVRHVH            SRRP*EKFPFAKIVFWGPBPGPPTDTPGQDADRPFP\QCA            CGGRFRH\PKLIRSHAACTSGRPHQ\CSHRCG\PRKBY            LTS\HRRIHTHTARQFPCKECCGRFRHFKPILLSHSHKRSBS            AQAAPGCSFQLDAGIPOSASAFPTPAVDLPKQAPPPGAPPEHP            QDIEAPPSLYSCDDOGRSFRLEFLRAHQHQHTGRFPFCABC            GKNPGKTHLVASHSVHSGERPFLRLKCGRRFLPRASQSGGRN            SAEPAFRPGFPVPCDQCGKAPRHKPYLAHRIATPAKIPVTP            DCRKAFSQSNL\VSHRRITHTGERFPACPDGRFSQSKNLICH            RKSHIRDAFCCALCQSTDDSEELLAHQKGDV         </p>
5377	762	1106	<p>           VSTFSLCLMFAGGGGRGVSN\AQSKRIVYSTRTPSGMSAEAS            ARPLRVGSRVEVIGKGRGTVAAYGATLFTATGKGVGLDRAK            KNDGTVQGRKYPTCDEGHGIFVRQSQIQVFEDGADITSPETPDS            SASVLKRSSTVTTARTSKLGLKPIKAPTARTITTRKPKPTFR            APTVQAGASSLPQSSASAGLSSESPPTAQPLAPLITPT            VLTSPGAVPPLPSPSKEEGLRAQVRLDEKLET\RLKRAEDKA            KIKELKHKIKLQEQWQWKS\WQRCQADLQRLRLKARKEAKAL            BAKERYEMNADTADA\ENATLDIEMAZERAESIQCEVRLKER            VDLELTLDLEIKAEIEEKSGDGAASSYQLKQLEQNAQLKDALV            RMRDLSSSEKQEHVK\LOKLMKKQQLQELVVRQQRERLQELSQ            AESTIDELKEQVDALGAEEVVENL\DRNLNLEKXVRELRETUG            DEAMTEMNDELQENARETELRLRQLDVAQARVREARQKREVA            QSTVADYQQTIKKYRL\TALQ\DVNKLNTQCRASVERQQPPP            ETDFDKIKFAETKAKAKAIEMELRQHEVAQARHMSLLTAFMPD            SFILRPGGDHDCVLLVLLMPLRICABLRKQACEKPELSEMCSE            RGLRGAAGRLQSPAAITQIVYSLMPAAGHRYHY*CHALGCRK            LDVYKQKSLTPMSRHSRSLDPLLELLRKLQDETVAVPELT            KAHYVGLYSIHLARQEDCTWGLADEIKETQCALDCHSVEVG            RLRAFLOQGRATDIALLEDLDTSCS\DIROFCCKIRRRMPGT            DAPGIPAAALRPGQVSDTLLDCRKLHTVWVAQEVAAAAQLI            APIARNGLIAVAALERLAFKASQ\VTTPSSSPYECLRQSCNII            ISTMNK\LVITAMQGEYDASRPSPKPP\VELRAALRAEITDA            EGLGLELEDRETIVKELKSLKIKGEELSEANVRUTLEKKLDS            PAKIADNR\IEKVQTR\ETQALIKKKRFRFETMDAIQADTDQI            ZNAKALKCRIMSQKRTIEGLRPPPSGIATLVSGIAGEBQR            GAIPQAPGSPVPGVLGVDSPLLLQIISAMRLISQLCHENSIL            XGAQMKASIASLP\LVAKLSHSPGSELPAQALYKTSQLEET            LNDLSHTHHVVDITRTPSAKSPSAQMLBQVQLKLSIDTVEKL            KDVELKRTVSQRPGATVPTDFATPSSA\FLRAKEEQDDTVEYK            KVTSPCAAGRCORRLVLTQEGQLKLSRLIS            DVFQK\PAKORKQKLTSCSEGEV*YHEVCAQESB*            /WFGVRLVHTQTKKPSCTLKAKET\HTGSTKFAARISCTK            SS*WPGVDWGGQYI\PIPKGRMRKEQP            QASCTTLRPLPILQKRRKATSRNNKALKPRRLVMTSCPLAL            REIATPRLSAMPHINDVKKLDPKVILLRPKRSTLKSRSVDLTR         </p>
5378	2009	664	

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			SFSFRNSKQYSGVPIIAANMDTVGTFEMAKVLCKS*VPGSGFWD VPMGCVFLIYKLPFTLKWMLLSVLLPASILVAEKFSLFTAVH KHYSLVQWQEFAGQNPDCLEHLAASSGTGSSDFGLEQLLEAIP QVKYICLDVANGYSBHPVFVDVVRKHPFQHTIMAGNVVVTGBMV EELILSGADI IKWIGQGSVCVTRKCTGVGYQLSVMWECADAA HOLKHHITSDDGSCSPGDVAKAFAGAGDFVNLGWLAGHSSEGG ELIERDGGKKYKLFYGMSS* T\AM\KKYAGGVAYVRASGKTVQV PFKGDVHTIRIDILGGIRSTCTTYGAAKLKELSKRTT*FIRVTQQ VNPFFSEAC
5379	2009	664	QASOTLRLPLDPLQPKRREATSRNRALKPRGRVIMVTSCLFAL RPIATPRLSAMPHINDVLDKDFKVLVLLPKRSTLKRSRSEVDLTR SFSFRNSKQYSGVPIIAANMDTVGTFEMAKVLCKS*VPGSGFWD VPMGCVFLIYKLPFTLKWMLLSVLLPASILVAEKFSLFTAVH KHYSLVQWQEFAGQNPDCLEHLAASSGTGSSDFGLEQLLEAIP QVKYICLDVANGYSBHPVFVDVVRKHPFQHTIMAGNVVVTGBMV EELILSGADI IKWIGQGSVCVTRKCTGVGYQLSVMWECADAA HOLKHHITSDDGSCSPGDVAKAFAGAGDFVNLGWLAGHSSEGG ELIERDGGKKYKLFYGMSS* T\AM\KKYAGGVAYVRASGKTVQV PFKGDVHTIRIDILGGIRSTCTTYGAAKLKELSKRTT*FIRVTQQ VNPFFSEAC
5380	2	2050	PSRAGGAERGRAAAARSFGSSAAGWCKPSTVLEAGACTMSSCVS SQSPSNRAAPQDELGGGSSSSSSSQPCALRGSLSLTHLGME SFIVVTECEPGCAVDLGLARDRPLEADGQEVPLDTSQSGQARPHL SGRKLSQLERSQGLAAGSLDMNGRCICPSLPYSPVSSPQSSP RLPFRPTVESHIYSTGMQDCVQLNGYTLKDIKQGSVGVKLA YHENDNTYAMKVLKSKKLLRQAAFFRPPFRGTRPAPGGCTQP RGPTRQVYQRTA(ILKKLHDHNVV\KLVEV\LDPNBDHLMV FVLEWQCPVMEVFTLKPLSEQARVYFDLIRGIEYLYQKII HVRDIPKSNLLVGRDGHIKADPFVSNFPGSDALLNTVGTTPA FMAPSLSETRKIESGKALDWMAGVTLVCFVFG*CPFMDERIM CLHSKIKSQALEFPDQDIAEDLDLITRMLQKIPESRIVVPET KLHPWVTRHGARDPLPSEDENCTLVETVEEVSNVKHPSLATV ILVKTMIKRSFGNPFEGSRREESLSAPGNLLTKKPTRCESL SELKT*KISPLPACCKVT*EPHPSGCRFSGWQFPFLITHSQPR *PEPPTDEALCPYETGRTCMAPLQVLMVGTPLPFLPSTSM PDLVGAPGSHFCFLNTALLRYNSHTM
5381	2	2050	PSRAGGAERGRAAAARSFGSSAAGWCKPSTVLEAGACTMSSCVS SQSPSNRAAPQDELGGGSSSSSSSQPCALRGSLSLTHLGME SFIVVTECEPGCAVDLGLARDRPLEADGQEVPLDTSQSGQARPHL SGRKLSQLERSQGLAAGSLDMNGRCICPSLPYSPVSSPQSSP RLPFRPTVESHIYSTGMQDCVQLNGYTLKDIKQGSVGVKLA YHENDNTYAMKVLKSKKLLRQAAFFRPPFRGTRPAPGGCTQP RGPTRQVYQRTA(ILKKLHDHNVV\KLVEV\LDPNBDHLMV FVLEWQCPVMEVFTLKPLSEQARVYFDLIRGIEYLYQKII HVRDIPKSNLLVGRDGHIKADPFVSNFPGSDALLNTVGTTPA FMAPSLSETRKIESGKALDWMAGVTLVCFVFG*CPFMDERIM CLHSKIKSQALEFPDQDIAEDLDLITRMLQKIPESRIVVPET KLHPWVTRHGARDPLPSEDENCTLVETVEEVSNVKHPSLATV ILVKTMIKRSFGNPFEGSRREESLSAPGNLLTKKPTRCESL SELKT*KISPLPACCKVT*EPHPSGCRFSGWQFPFLITHSQPR *PEPPTDEALCPYETGRTCMAPLQVLMVGTPLPFLPSTSM PDLVGAPGSHFCFLNTALLRYNSHTM
5382	1536	203	GARGSQDAPALQEARVVRGPERAQRGRMTKARLPRILVILGS VFMLILLIVYDSAGAAHFLHTITSFRPHTGFLPTFGDRDRRE LTADSVDLEFLOKFLSAGVKSQDLPRKHTIQFAPRGSSESVRG YNSMDPARRSPDQCAQRRESVFLAGTCSASLAPTRKBRFP DIPMSLESHLIVDORHAIYCYVVKVACTNWRKRVMLVSGSLH RGAPYRDLRIPREHVNHASHLTKFMYERYGKLSRIIMKVKL KKTITKFLVRDPLVRLISAFRSKFLENSEF*PQVRRAHAARV RQHPQARLGARGLPWQ\VSFANFIQYLLDPHTKLAFFNEH WRQVYRLCHFQCIDYDFVGLKSTLDEDAQLQLLQVDAAPLP

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, * =Stop Codon, / =possible nucleotide deletion, \ =possible nucleotide insertion)
5383	45	5250	<p>PKLPGTUPSSWEEDWFAKIPLANRQQLYKLYEADPVLGYFKP KSLRD</p> <p>VERLLGCRNSKRTWHLISLKNPWRRLQQLSGMYSAHELKCLLS VKSITWPRYLDLSNFPANGLVDLAIQDASKEVCSTCVQDFSN CSOHLGHIEPLFTVYNPLFDKLLYLLRSGCLNCHMLTCTRAVI HILLCLQLRVLEVSALQAVYELERILSRLEFNADPSAREEL EQYTTRIVQNLLSGOGAVKVNKCESKLIJALFKWBNKNAKRC PHCKTGRSVVRKEHNSKLTITTFPMVHRTAQQKDEPLGIEBAQ IGKRGVLTPTSAREHLSALNKNKFFLNLYLFSQMDGDMESRFN PSVFFLDPLVVPDSRSRPSVRLQDQMPTNGQTVNLQAVNKDVL IRKLLALMAQEQKLPEEVAFTPTDEEKSLIADRSPLSTLPQ SLIDKLYKIWRQLGSHVNI VFDSMDKIMMDKYPGIRQILEKKE GIFRKHMKGEVDYARASVICPMDYININEIGIPMVFAKLTYP QVTFWNVQELROAVINGPNHVPASGVINEDSGSRTALSADMT QREAVAKGLITPATGAPKPGQKTVCRHVRINGDILLNLRQPTLR RFSIQAHARTLPEEVLRLHLHFAKCAKNADPGDEMNARFPQS ELGABEAFLVACTDCQYLVKEDQOAGLIGQENFGASNTFQS CPTFRHYMELVYKGTOKVGVKILSPSTLKPPLATKQKQVS TLLINI IPEDHIIPLANLGGKAKITGKAWKETSRSVPGNFDSCM ESQVIRREGELLOGVLDKAIHYSGSAVGLVCCETEYIGGETSGKV LTCLARLFTAYTLQYRGFTLGVEDILVKPKADVKQRRIIEESTH CGQAVRAALNPEAASVDEVRGKGDAHLGKDQDQNMIDLP KEEVNHSNBIKACMPFGLHRQFPENTLQMLVSGAKGSTVNT NQISCHLQIIELEGRSTPLMAGSKSLPCFPEYFTFRAGGFVTG RFLTGKPKPEFFHCNAGREGLVDVATKTSRSGYLQRCIIKHLE GLVVQYDLITVRDSQSGVVQFLVKGEDGLDIPKIQPLQKQFPFLA SMVEVIMSGHHEVLBSADPKKALHIFRAIKKQKQSHKPNTLR EGAPLSYSQKITQAVKALKESSEKRNKGR/FWDS/G/RMLRMV SLDESESRKQKQKAAQCDPLSLVRPDYTFASVETFEKVD YSQWAACTEKSYKESSELSDLRLTLQKQKQKSLCEPEAVG LJAAQSIGESTQNTLNTFAGRGKNNVTGILPLREILNVAS ANIKTMMISVFLNTHKALKRVKSLKQQLTRVCLGEVLQKIDVQ ZSCFHEKQNKQFQVYGLRFGFLPHAYYQSKCLRPEDILRPMET RFFLLMESIKKGNKQASAPRNVTNRATQRDLNAGELGRSRG EQQDEBBSBHHIVDAEABODDASDAKREKQEEVDYSEEB ERRGEENDDQEQERNPHREGARKTQDEEVL/GH*GGPV PSRPDDAAPETHPQGPAG/BAEMERVRCAVREIHPDIDYQYD TBESLWCQVTVGLPLMKINFDMSLVVSLAHRVIVYATKGITRC LLNETTDMNKEKLVNTRGILNPELFKAYAEVLDRLRLYSNDTH AIANTYGLAALRVIRKEIDVFAVYIADVPRHLSLVADNCF EQVYKPLNRPGIRSMSPQLQMTFTSFGFLKQATMGSHDELR SPSACLVGVKVVVGGTGLPELKQPLR</p>
5384	196	886	<p>QSCQRLPVLV*F*GPGSGCPCITLSLPVGRPHALPRTAPVYH TILKGDKQDQMGMLDGVMGREPGQEGPGQSGDKGEMSPG APCQKRFPFASVGRKTHLSGEDPQTLLFERVFNLDGCDMAT QGFAPPLRGIYFFSLMVHSHNYKETYVHIMENKRAVILYAQPS ERSIMQSQSVMLDLAYGDRVWVRLFKQRENAIYSNDPOTYITF SGHLIKARDD</p>
5385	326	799	<p>LMVPRTKKEAPAPPKASAKAKAL/KAKKAVLKDVESHKKNKIM SPTFRPKTL*LRQPKYPWKSTPRNKLDHIVI IKFPLTTE*A VKKIBNLSLVFTVDVKANKHQIKQAVKK/LCDDIVAKVNTLIQ SDGERKAYRLADPYDALVATKIGIT</p>
5386	326	799	<p>LMVPRTKKEAPAPPKASAKAKAL/KAKKAVLKDVESHKKNKIM SPTFRPKTL*LRQPKYPWKSTPRNKLDHIVI IKFPLTTE*A VKKIBNLSLVFTVDVKANKHQIKQAVKK/LCDDIVAKVNTLIQ SDGERKAYRLADPYDALVATKIGIT</p>
5387	2	2117	<p>FVVAASGGGVFLGHRKASLLSASTPTPFPFOWLPHERNALA SDDLVPFPFELVVRVWAGILTYLIMHRGLDCAGALLSSY LIVLIMILVAVVICVSMCMVSMRGTICNDPGRKSMKLYLRL ALLFFPMVWASLGAANVADGVQCDRTVVGNIATVVSNIITAA TVVSIIIVFDPLGGRMAPYSSAGPSHDSHDSQLLMLKTAAT</p>

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5394	2	982	<p> \NLPIHTQPS\YRFKANN\DSGEYTCQTGQTS\ASDPVHLTV  LSEWLVLTQPHLEFQPGETIMLRCHS\WRDKP\LAKVITFFQNGK  SQKFSHLDPPTSIPQANHSHSGDYHCTGNIGYTLFSSKPVTTITV  QVPSMGSSSPMGIIIVAVIATAVAIAVAVALITYCRKKRISAN  STDVPKAAQFEPGQMIATRKQLEETNNDETADGGYMTLNF  RAPTDDDKNIYLTLPFDHVNINN </p> <p> GGDSAGTWETQVSGVCPKSTNLITPPTVLLLASNDGQAAP  PKAVLKLPPHINVLQ\EDSVTLTQGAQP\ERSDSTQVFWG  \NLPIHTQPS\YRFKANN\DSGEYTCQTGQTS\ASDPVHLTV  LSEWLVLTQPHLEFQPGETIMLRCHS\WRDKP\LAKVITFFQNGK  SQKFSHLDPPTSIPQANHSHSGDYHCTGNIGYTLFSSKPVTTITV  QVPSMGSSSPMGIIIVAVIATAVAIAVAVALITYCRKKRISAN  STDVPKAAQFEPGQMIATRKQLEETNNDETADGGYMTLNF  RAPTDDDKNIYLTLPFDHVNINN </p>
5395	3135	531	<p> RASDAKNGEGLINTRKSTDSVPTISKSTLSRSLSQASDPDGAS  SSGNPEAVALAPDAYSTGSSASSTLTKRKPRPPLSKKKQTTK  KPTETPPVKETOQDEESLIVPSGENTLASETKTESAKTEGSPSPA  LLEETPLEPAGPKAACPLDSESVGVVFPASGGGRVQNSPPVG  RKTLLPLTAPFAGEVTPSDSGQEDSPAKHGSVLEFDYSDEKS  SWNDQENPPPTKIGKPKVAKMPLRRPKMKTKPEKLDNTPASP  PRSPAENNDIPKAGTYTFDIDKNDPNNPFSSTKMQESPKL  PQOSYHFDPTCDESVDPTKSTSPSSPKSPASPEIPASAME  ANGVDGGLNKPARKKTKPLKTDITFRVKSIPKPSPLSDPPSQDP  TPAATPETPFIASVVAHTDEKLAVTNQKMTCTVLDLADKQD  YFQPSDLSTFVNETHFSSPTEELDYNSYIIEYMKESGLPQD  DDAPKQALYLMFTDSOESPVKSSPVMSESPPTCSCSSFEETE  ALVNTAKNGHPVPRGIAPNQESHLQVPEKSSQKLEAMGLGTP  SEAIRITAPGCSFASADALLSRLAHPVSLGALDYLKPLAKKN  PPLFAQKLQREAAHPTDVSISIKTALYSRIQTAEVEKPAGLLFQQ  PDLDLALQIARABIITKEREVSSEWKKRYEBSREVMEMRKIVAE  YEKTAQMIEDQREKSVS\HQTVQQLVLEKEQA\LDLNSVEK  \SLADLFRYRKMKVLEGPFRNBEVLKRCQAEYLSRVKKEBQR  YQALKVHA\EEKLDRANAK\IAQVRGKAQOQAAHQASLAERS  CRV\DALERTLEQNKRIEELTKICDELLAKMGKS </p> <p> RASDAKNGEGLINTRKSTDSVPTISKSTLSRSLSQASDPDGAS  SSGNPEAVALAPDAYSTGSSASSTLTKRKPRPPLSKKKQTTK  KPTETPPVKETOQDEESLIVPSGENTLASETKTESAKTEGSPSPA  LLEETPLEPAGPKAACPLDSESVGVVFPASGGGRVQNSPPVG  RKTLLPLTAPFAGEVTPSDSGQEDSPAKHGSVLEFDYSDEKS  SWNDQENPPPTKIGKPKVAKMPLRRPKMKTKPEKLDNTPASP  PRSPAENNDIPKAGTYTFDIDKNDPNNPFSSTKMQESPKL  PQOSYHFDPTCDESVDPTKSTSPSSPKSPASPEIPASAME  ANGVDGGLNKPARKKTKPLKTDITFRVKSIPKPSPLSDPPSQDP  TPAATPETPFIASVVAHTDEKLAVTNQKMTCTVLDLADKQD  YFQPSDLSTFVNETHFSSPTEELDYNSYIIEYMKESGLPQD  DDAPKQALYLMFTDSOESPVKSSPVMSESPPTCSCSSFEETE  ALVNTAKNGHPVPRGIAPNQESHLQVPEKSSQKLEAMGLGTP  SEAIRITAPGCSFASADALLSRLAHPVSLGALDYLKPLAKKN  PPLFAQKLQREAAHPTDVSISIKTALYSRIQTAEVEKPAGLLFQQ  PDLDLALQIARABIITKEREVSSEWKKRYEBSREVMEMRKIVAE  YEKTAQMIEDQREKSVS\HQTVQQLVLEKEQA\LDLNSVEK  \SLADLFRYRKMKVLEGPFRNBEVLKRCQAEYLSRVKKEBQR  YQALKVHA\EEKLDRANAK\IAQVRGKAQOQAAHQASLAERS  CRV\DALERTLEQNKRIEELTKICDELLAKMGKS </p>
5396	3135	531	<p> RASDAKNGEGLINTRKSTDSVPTISKSTLSRSLSQASDPDGAS  SSGNPEAVALAPDAYSTGSSASSTLTKRKPRPPLSKKKQTTK  KPTETPPVKETOQDEESLIVPSGENTLASETKTESAKTEGSPSPA  LLEETPLEPAGPKAACPLDSESVGVVFPASGGGRVQNSPPVG  RKTLLPLTAPFAGEVTPSDSGQEDSPAKHGSVLEFDYSDEKS  SWNDQENPPPTKIGKPKVAKMPLRRPKMKTKPEKLDNTPASP  PRSPAENNDIPKAGTYTFDIDKNDPNNPFSSTKMQESPKL  PQOSYHFDPTCDESVDPTKSTSPSSPKSPASPEIPASAME  ANGVDGGLNKPARKKTKPLKTDITFRVKSIPKPSPLSDPPSQDP  TPAATPETPFIASVVAHTDEKLAVTNQKMTCTVLDLADKQD  YFQPSDLSTFVNETHFSSPTEELDYNSYIIEYMKESGLPQD  DDAPKQALYLMFTDSOESPVKSSPVMSESPPTCSCSSFEETE  ALVNTAKNGHPVPRGIAPNQESHLQVPEKSSQKLEAMGLGTP  SEAIRITAPGCSFASADALLSRLAHPVSLGALDYLKPLAKKN  PPLFAQKLQREAAHPTDVSISIKTALYSRIQTAEVEKPAGLLFQQ  PDLDLALQIARABIITKEREVSSEWKKRYEBSREVMEMRKIVAE  YEKTAQMIEDQREKSVS\HQTVQQLVLEKEQA\LDLNSVEK  \SLADLFRYRKMKVLEGPFRNBEVLKRCQAEYLSRVKKEBQR  YQALKVHA\EEKLDRANAK\IAQVRGKAQOQAAHQASLAERS  CRV\DALERTLEQNKRIEELTKICDELLAKMGKS </p> <p> RASDAKNGEGLINTRKSTDSVPTISKSTLSRSLSQASDPDGAS  SSGNPEAVALAPDAYSTGSSASSTLTKRKPRPPLSKKKQTTK  KPTETPPVKETOQDEESLIVPSGENTLASETKTESAKTEGSPSPA  LLEETPLEPAGPKAACPLDSESVGVVFPASGGGRVQNSPPVG  RKTLLPLTAPFAGEVTPSDSGQEDSPAKHGSVLEFDYSDEKS  SWNDQENPPPTKIGKPKVAKMPLRRPKMKTKPEKLDNTPASP  PRSPAENNDIPKAGTYTFDIDKNDPNNPFSSTKMQESPKL </p>
5397	3135	531	<p> RASDAKNGEGLINTRKSTDSVPTISKSTLSRSLSQASDPDGAS  SSGNPEAVALAPDAYSTGSSASSTLTKRKPRPPLSKKKQTTK  KPTETPPVKETOQDEESLIVPSGENTLASETKTESAKTEGSPSPA  LLEETPLEPAGPKAACPLDSESVGVVFPASGGGRVQNSPPVG  RKTLLPLTAPFAGEVTPSDSGQEDSPAKHGSVLEFDYSDEKS  SWNDQENPPPTKIGKPKVAKMPLRRPKMKTKPEKLDNTPASP  PRSPAENNDIPKAGTYTFDIDKNDPNNPFSSTKMQESPKL </p>

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SD TD NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E= Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *=Stop Codon, / =possible nucleotide deletion, \ =possible nucleotide insertion)
			PQSYNFDPTDCESVDFPKTSSTPSPSKSPASFEIPASAME ANGVDGDLGNKPAKIKKTKLTKDTTRVKKSPKPSPLSDPPSQDP TPAATPPTPVPISAVVHATDEEKLAVTNKKWTCMTVDLEADKQD YQPSDLSTFVNEKTSPPTELDYRNSYRIYMEKIGSSLPQD DDAPKQKALYLMFDTSQSPVPSKSPVMSSEPTFCSSSTETE ALVNTAAKQHPVPGIAPAOESHLQVPEKSSQKLEAMGLTP SEATITAPESVASADALLSLAPVSLCGALDYLEPDLAEKN PPLPAQLQREAAHPTDVISKITALYSRIGTARVEKPAGLPQQ PDLDSALQIARAEIITKEVESEWKKYKESRREVMEMRKIVAE YEKTIQAQIETDEBQREKVS\HQTQQLVLEKQA\LDLNSVEK \SLADLFRRYEMKEVLBGRINBEVLKCAQGYSLRVKKEQR YQALKVHA\EEKIDRANAE\IAQVRGAQEQBARHQAESLAERS CRV\DALEKTEQKKNKEIEELTKICDELIAWKMKS
5398	56	5426	SGEVRMESNPNQGVPRPSYVPSAP*ARFSEINFDTGLDLS HPSLSVAPNTEAMSFEKDIYQVCLRIPTPQSEKELESSEGCVH LLSQSTVLKEFCQITLGRLESKSSG\QMAQKTSFFPGFIPGAT TQRFQSGCMHPVVDLKLGGSRLLIFTYGLTNSGXTTTFQOTE ENILRLFTLVLVPSLQELRLTYMKEVYSLSSBQEK EETASKALLRQIKFVTHVNDSDDTLYGSLTNSLTSTSEBSIK DVEQANLNMANSIKFVWVSFPRIYNEYIYDLFVPSKQKRR MLRLSDQVKGYSFIKDLQWQVSDSKRAYRLKLKGKHQVAPT KLNNASRSRHSIPTVKILQIEDSEMSRVISVFLSLCOLAGSER TMKTQNEGERLRETGNINTSLTLGKCINVLKNSKSKFQOHVP FRESKLTHTYF/QSFPNGKGIKIMVNI SQCYLAYDETLLVLTFS AIAQKVCVPTDINSQSQKLGPGVPKVSQDVSLSNSKILNVKR ATISWENSLRDLMEDEDLVELENAETED/VGETKLLOEDLDK TLEENKAFISHEEKKRLDLOLEDLKKKLINEKKEKLTLEFKIRE EVTQETQYWAQREADFKETLLQEREILEENARRRIATFKDLVG KCDTREAAKDIKATRVTEBATAACLEKFPQIAGELAKRTGEL IKTKELEKREMSDLSLQELTSHKTIQWQRTKELINIJDQ KEDTINEPNLKSMENTFKCHDQATSSILNKLICNETVTV PKDSKSKICSEKRVHENELOQDEPPAKKGSITHVSAITSDOKK SEEVPRNIAIEDIRVLQBNNEGLFALLTIENTELNKESEKAE LNKQIVHFQQLSILEKKNLTLSKEVQIQSNYDIAIAELHVQK SKNQEQEEKIMKLSNEITATRSITTNVSOIKLMTKIDELRLL DSVSQISNIDLNLRLDLSNGSEBDLNPOTDOLLGNDVLSKQV KEYRIQPNRNSPHSSIETAWERCKEIVKASSKSHQIEELEQ QIEKLQAEVKGYKDBNRLKEKEHQNDDLLKEKETLIQOLKEE LOEKNVTLDVQIHVVHGGKRLSBLTQGVTCYKAKIELELTILE TQKVRSHSAKLEQDILKESILKERNLKEFQHLQDSVINT KOLNVKELKSEETGLTNBLQDMHLLQKLEKESEETNROTEK LKEBELSASARTQWLNMDLOKVEEDPDLKLEITDARKQIKQV QKRYVMDREDKLRIKINLEKKEKQCSQDLMDKQFTIQK BQLNQKVEATQYERACKDNLVAKKILKUMRNLEQGEQV BODVILBAKLSEVERLATELDNRVKNCDLTONQRESKEHE NNTDVLGKLTLNLOQELSESQKYADRKWLEKMLITQAKEA ERNIKEMKKYABDRRRFPKQONEMEILTAQTEKDSQKWRB ERDQLVAALIEQLKALISSNVQKNSIEQLKRIITSETSKETQI MDIKPRISSADPKQTEPLSTSEISRNKIEDGSSVLDSECV STENDOSTRFPKPELIOTFLOPNQMAVHGPCTTPVTVKIPK ARRKSNEMEEDLVKCNKCNATPRLNKFPLSDRNSSVKKEQ KVATRPSSKTYSLRSQASIIQVNLATKKKEOTLQKQDFLOHS PSILOKAKKIITMSSSKLSNVKSEKNSVQPKRAKKLTYSE ISSPILDISQVILMDQKMKESDHQIKRLRLTKTKAK
5399	705	230	GRFAKPLSGQDTEYKBCPSYDRQKQKIKATDLMVAMRCLG ASPTQVQRLQHTQIDGNBLRLEPFTLIDHMQIKQDEPKKE ILLAMLVKKEKQYKASDLASKLTSLEKLGKTHKEV\DLFPH VADLEPNKVKVDEPHIKTISYLDCTY
5400	931	246	SHCSSGMEIPTPNYASAAALVAGNYINVCQOTPHRVFVQVVK QASMEDIPRGCHKYRLKFAVEIIOKQVKNCAZLVPSPTQGB TAPENVNFTFEGTQKPNDEENTFYGRKLSMKPELEAGNI\PON

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5401	3	1360	<p>           FGNVSPFMTLVLAHLAVAGYITWNSSTEDTNYKMKVQTVKQV            QRMDFFIKLDTYLLHNIAQSQELIPQMQVLNHPQYGVKVKINS            RLKKVQLS            TGHVSGYPTSLAFLAPDRFPFPPKILHLHQAIVRLSCGAGSMGS            QAAAEKRNWASMGSSSLSCSMGCFKDRDLYFTWHESTYFME            KNAPRQDDMLFYVERKLAYSQSGESGADGRKAAAEFVFEVSVHERD            SKKLPGLDGPDIDWEESSVCLNLLQLKLYMYTCACTRADGDI            HIHKKSSQQVFASPSKHPMDSKGRHSKISYPNIFMIDSPAE            VFSDMTVKGSBMVCVELVASDKTNTFGQVIFQGSIRYALKKVV            DNRVSVAARMAQKMSFGFSKYSNMEFVRHKGPGQKGAEMA            VSRVSTGDTSPCTEEDSSPASPMHIEVTSFTPTPTPERNNRPA            FFSPLKRRKVPNRRIABMKKSHSANDSEFFEDDGGADLHNAT            NLRSSLSGTGRSLVGSWKLNRADGNFLLYAHLTVTLPLRI            LDTILEVRQKPIILMT            GECFIMAAYQNDLVFEFASNVMEDEKQGDPAIFPAVIVEHV            PGADILNSYAGLACVSEPNMIMTSSGLVAEEEDIDDDDDITL            TVEASCHGDDETIETRAAALLMDSFGPMLDSEKIDHNIIFSS            PEDDMVAVPVTHSVTLQDIPVEMTEQVQVAVPQASSEQ            PKRKGKRTKPPRDSPATFNLSVKKKNDGKNTIYMEFLL            ALLQDKATCPKYIKWTOREKGIKFLVDSKPSRLRKHKKKPA            MNYEPMGRALRYYYQRIKAKVSGQRLVYQFKMPKDLIYINDE            DPSSSISSDPSISSATSNRNQTSRSRVSSSPGVKGGATTVLK            PGNSKAAKPKDPVEVAQPSVLRVTQPTQSPYPTQLFRTHVQV            PVQAVPEGAARTSTMDTETLNSVQSIIRITQAPQVPPVVS            RNQQLHTVTLQTVPLTTLVIASTDPAGTQSGKFIIQATPSSQ            MTVLKENVLMQSQKQASPPSIVLGRARVQVQLTSNVQITCNQT            VSVASSPFSVATAPVTVTLFLGSSQLVAHPGTVITSVIKTO            ETXKTLQSEVKKESEDLKENTKTEQOQPPVVMVSSNGFTS            QVAMQKELLEPSF         </p>
5402	3445	1563	<p>           GECFIMAAYQNDLVFEFASNVMEDEKQGPATIPRAVIVEHV            PGADILNSYAGLACVSEPNMIMTSSGLVAEEEDIDDDDDITL            TVEASCHGDDETIETRAAALLMDSFGPMLDSEKIDHNIIFSS            PEDDMVAVPVTHSVTLQDIPVEMTEQVQVAVPQASSEQ            PKRKGKRTKPPRDSPATFNLSVKKKNDGKNTIYMEFLL            ALLQDKATCPKYIKWTOREKGIKFLVDSKPSRLRKHKKKPA            MNYEPMGRALRYYYQRIKAKVSGQRLVYQFKMPKDLIYINDE            DPSSSISSDPSISSATSNRNQTSRSRVSSSPGVKGGATTVLK            PGNSKAAKPKDPVEVAQPSVLRVTQPTQSPYPTQLFRTHVQV            PVQAVPEGAARTSTMDTETLNSVQSIIRITQAPQVPPVVS            RNQQLHTVTLQTVPLTTLVIASTDPAGTQSGKFIIQATPSSQ            MTVLKENVLMQSQKQASPPSIVLGRARVQVQLTSNVQITCNQT            VSVASSPFSVATAPVTVTLFLGSSQLVAHPGTVITSVIKTO            ETXKTLQSEVKKESEDLKENTKTEQOQPPVVMVSSNGFTS            QVAMQKELLEPSF         </p>
5403	3445	1563	<p>           GECFIMAAYQNDLVFEFASNVMEDEKQGPATIPRAVIVEHV            PGADILNSYAGLACVSEPNMIMTSSGLVAEEEDIDDDDDITL            TVEASCHGDDETIETRAAALLMDSFGPMLDSEKIDHNIIFSS            PEDDMVAVPVTHSVTLQDIPVEMTEQVQVAVPQASSEQ            PKRKGKRTKPPRDSPATFNLSVKKKNDGKNTIYMEFLL            ALLQDKATCPKYIKWTOREKGIKFLVDSKPSRLRKHKKKPA            MNYEPMGRALRYYYQRIKAKVSGQRLVYQFKMPKDLIYINDE            DPSSSISSDPSISSATSNRNQTSRSRVSSSPGVKGGATTVLK            PGNSKAAKPKDPVEVAQPSVLRVTQPTQSPYPTQLFRTHVQV            PVQAVPEGAARTSTMDTETLNSVQSIIRITQAPQVPPVVS            RNQQLHTVTLQTVPLTTLVIASTDPAGTQSGKFIIQATPSSQ            MTVLKENVLMQSQKQASPPSIVLGRARVQVQLTSNVQITCNQT            VSVASSPFSVATAPVTVTLFLGSSQLVAHPGTVITSVIKTO            ETXKTLQSEVKKESEDLKENTKTEQOQPPVVMVSSNGFTS            QVAMQKELLEPSF         </p>
5404	187	1111	<p>           LPVTLIPAKMKHLQSTLILLLLVLELKPAPTOQDSRIYDGT            DNFRFSIFSQDYERKYLKGKHIKEKETVILPNEKSLQLOKDEAT            TPLPKKKNDEMTCLLVCCLSGSVYCEHVDIADVPPLKESAV            LYARFNKIKKLTAKDFADIPNLRDLDTGNLIEDIGDTFSKL            SLVEELSLAENQLLKLPLVLPKLTLENKYNKIKSRGKANAFK            KLNLLTFLVLDHNALESVPLNPSIRVTHLQFNINIASITDFT            CKNADTSYIRDIEERLBNPVLVGHKPNPSFICLKLRLDGSYF         </p>
5405	2199	1220	<p>           QNSRSLHMDPQNGHSGSSLLVVIQPSLDSRPRLDYERSIQPTA            LLSLDIKALRGSENYTEGFSVVKPAPRTAPRQEKHERTHEII            PINWNNYERHHTSHLGHVLPNSNARGPILSRSTSTQASSSGS            NSSASSBQGLAGRSPPTRPVPGHRSERAIRTOPKOLIVDLKGS            LKEDLQHFILCBQCKKCECTAHTAPSLPSCLANQKCLCSAE            SWRYGTCKLAVKQIFPKSCSNDDBDSYDNPCSCSGSHCCBR            YLCMGMSLFLPCLCYPPAKCLLCKRCKYDMHPRGCRCKMS            NTVYCKLESCEPSRGQKPS            RWRITNVSGPLTPMDVATEPCLREHQCLDTAQNLVYRNVMLENY         </p>
5406	279	2732	

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			RMLVPLG/IIAVSKPDLITCLBQEKSPWFMRRREIVAKFPVVC SHFTQDFWPHQHKIDPPQKATLRRYINCEIKNVHLCKDHSVDR CKVHGGYVGFQWCLPATQSKIFLFDCKVIAFKHFSNSNEHKIS HTEKLLFKCKECKGKSPCLMSHLAQHKI IHTVWVWCKCEKOGKAF KCPSPITTHKRLNVEKPYCCYCEGKVFVWSSRL/TTHKNNYTRY KLYKCEBCKAFNKKSS I LTTWKIIRTEKPYCKCEKAKAFNKKSS NITHEKKIHPGEKPYKCEBCKAFNWPST/ITTHKRIHTGEKPYT CEBCKAFNQSNT/TTHKRIHTA/EKPYKCEGEAFSRS/ANL TEKKEIHTKPKPYKCEBCKAFNKKSKL/TEHKLITHTGEKPYKCE KCKAFNCPSPITTKHNRINTJEKPYTCEBCKGFVNNSSRL/TTHK KNYTRYKLYKCEBCKAFNKKSS I LTTWKIIRTEKPYKCEBCKGK AFNKKSKL/TEHKTITHTGEKPYKCEBCKAFNKS I LTTKHKRIHT GEKPYKCEBCKGKAF/TTSSNLTTHKIIHTGEKPYKCEBCKGKAF/TC SSNLTTHKIIHTGGKPYKCEBCKGKAFNQSNT/ITTHKIIHTGEKPY KCEBCKGKAFNKS I LTTKIIHTGEKPYKCEBCKGKAF/KAFLSST LSTHKRIHTGEKPYKCEBCKGKAFNPSNLTTHKIIHTGEKPYKCE BCKGKAFNPSNLTTHKIIHTGEKPYKCEBCKGKAFNQSNT/ITTH NKIITGZKLYKPEWVITLITHTGEKPYT
5407	3	659	REPERSSCCGKWLGAHLLAARAFPCRAITELTBQKGLAVLIL AIIILLQTLAQSIKGNHLVKVVDYQDGSVILTCDAEAKNTWTF KDGKMIGFLTEDKKKNLGSNAKDPROMVQCKGSQNKSPKQVY YRMQNCICELNAATISGFI/PAFISVIFDLAVGVVFIAGTGMFR QS/RASDKQTLPL/NDPAPTQPLDKPRMTQYSHLQGNVLRNR
5408	2745	6128	QGSKGTCHPQAGQPWDEGVNQEAPSCSEPMWQSDEPPTMPRL HARQHTPLPGSADYRRVVSVRPQPHRDKSDRAAKREQGS APRPVPASRGKTLCKGYRQAPPGPQRFICSAFPPWASRF STPCPGGAVREDYTPVGTQGVPSLALAQGGPGQSWRFLEWKSMP RLPTDLIGGPNWPHYDFERSCWRAISQEDQLATCWAHQECGE VRNKDMSWPEEMSFIANSSKIDRHKVPTEKATGLSNLGNTCFM NSSIQCVSNTQPLTQTFISGRHLYELAKNTPIGMKGMKACYGD LVQRLMSGTQYHVALPLKRWITAKYAPRNGFGQDQSGELLAFPL LDGLHEDLARVHIEKPYVELKSDGDRDNEVAEADNHLRNRIS IVVDLPHQGLRSQVKCKTCGHSIVRFPDNTFLSLPLMDSYMH EITVILKLDGTTTPRVYGLRLNMDKRYTGLKQSLDLCGLNSKQIL LAEVHGSNIKNFPQDNQKVRISVSGFLCAFEIIPVVPSPISASSP TQTD/PSSSPSTNEMFTLITNGDLPRPFIIPNGMPNTVVPCTEK NFTNGMNVNHPMLPDSPTTYGII/VAHRKMRTELYFLSSQKNR PSLFGMPLIVPCTVTRKDKLYDAVNIQVSRLASPLPQBSNRH AQDCDMSGYQYPTFLRVQKDGNSCAMPNRYFRCRGKICDGE DRAFTIGNAYIADVNDPTALHRLYQTSQERVVDHEBSVEQSRRAQ VEPINDSLCRAFTSBEELGENSEMYCSCKKTHCLATKRLDLWR DPFLIILHWRFPFVNGKWKISQKIVKFPSSSFDPSAFKLVPRPD ALCOHPLTWQDELSPRLAREKVRDAQSACEDVILSSK PSPLSAMTISPSKGSBSSSRKSTSCPSKSSPSNPSPLTGS KGRLLRPLQISKNLSSSKNLDASKENGAGQICELADALSRGH VLGSGSPBLVTPQDEHVALANGPLYHBAACNCCNGYINQQLG NHISEEDSDQREDTRIKPIYNLYALCHSGILGGHYVTYAKN PNCKWYCYNDSSCKELHPDEIDTDSAYILFVEQQGLDYAQFLPK TDGKKMADTSSMEDFESDY\ERYCVLO
5409	2745	6128	QGSKGTCHPQAGQPWDEGVNQEAPSCSEPMWQSDEPPTMPRL HARQHTPLPGSADYRRVVSVRPQPHRDKSDRAAKREQGS APRPVPASRGKTLCKGYRQAPPGPQRFICSAFPPWASRF STPCPGGAVREDYTPVGTQGVPSLALAQGGPGQSWRFLEWKSMP RLPTDLIGGPNWPHYDFERSCWRAISQEDQLATCWAHQECGE VRNKDMSWPEEMSFIANSSKIDRHKVPTEKATGLSNLGNTCFM NSSIQCVSNTQPLTQTFISGRHLYELAKNTPIGMKGMKACYGD LVQRLMSGTQYHVALPLKRWITAKYAPRNGFGQDQSGELLAFPL LDGLHEDLARVHIEKPYVELKSDGDRDNEVAEADNHLRNRIS IVVDLPHQGLRSQVKCKTCGHSIVRFPDNTFLSLPLMDSYMH EITVILKLDGTTTPRVYGLRLNMDKRYTGLKQSLDLCGLNSKQIL LAEVHGSNIKNFPQDNQKVRISVSGFLCAFEIIPVVPSPISASSP TQTD/PSSSPSTNEMFTLITNGDLPRPFIIPNGMPNTVVPCTEK NFTNGMNVNHPMLPDSPTTYGII/VAHRKMRTELYFLSSQKNR PSLFGMPLIVPCTVTRKDKLYDAVNIQVSRLASPLPQBSNRH AQDCDMSGYQYPTFLRVQKDGNSCAMPNRYFRCRGKICDGE DRAFTIGNAYIADVNDPTALHRLYQTSQERVVDHEBSVEQSRRAQ VEPINDSLCRAFTSBEELGENSEMYCSCKKTHCLATKRLDLWR DPFLIILHWRFPFVNGKWKISQKIVKFPSSSFDPSAFKLVPRPD ALCOHPLTWQDELSPRLAREKVRDAQSACEDVILSSK PSPLSAMTISPSKGSBSSSRKSTSCPSKSSPSNPSPLTGS KGRLLRPLQISKNLSSSKNLDASKENGAGQICELADALSRGH VLGSGSPBLVTPQDEHVALANGPLYHBAACNCCNGYINQQLG NHISEEDSDQREDTRIKPIYNLYALCHSGILGGHYVTYAKN PNCKWYCYNDSSCKELHPDEIDTDSAYILFVEQQGLDYAQFLPK TDGKKMADTSSMEDFESDY\ERYCVLO



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			TQTFSSSFSTNMPFLTNGDLPRFIFPNCMENTVVPQOTEK NFTNGVNGHMFSLPDSPTTYIVAVHRKMMRTLEYFLSSQKNR PSLEFGMPLIVPCTVHTRKKDLYDAVNIQVSRLASPLPPOEASNH AGDCDDSMGYQVPTTLRVVQKDGNSCANCWFYTRFCRGCKIDCGE DRATGNAYLAVDHPHTALHLKRYQTSQRVVDHESVEQSRRAG VSPILNLSCLRAFPSSEELSBNBMYCSKTHCCATKLLDLWR LPPLILHKLKRFQVNGWIKSQIVKVPRESSTDFSAVPHRI ALCQKPLTPQDRLSEPRILAREVKVKVDAQSSAGEEDVLEKS PSSLASNIITSSPKGSPSSSRKSGTSCSPSKNSPNSPRTLGRS KGRLLRPQIGSPHNKLSSENKLDASKENGAQICELADALGRGH VI.GGSQPELVTPQDHEVALANGFLYEHEACGNGCGNGVSNQGLG NHSEEDTDDQREDTRIKPIYINLYAISCHSGILGGHYVUYAKN PNCKVYCYNDSSCKLHPDEIDTIDTSAVILFYEQQGIQVQAFLPK TDGKMAOTSSMDEDFESDY\EKVCVQ
5410	2	710	LKFPQGARHVLAARNAQAPTEGHELYKLLVIGDLGKGTSTIKRY VHQNFSSHYRATIGVDFALKLHWDPETVVRVLQNLDAQGERPG NHTRVITYREANGAFIVPDTVRPATFSAVAANKNDLDSKLSLENG XVSVVILAAKCDGSDVLMNGLKMGDCFCKEIGFVNGPETSAAK SMTNIDRASCICLVKHLNACDLNDSIEPDVVKPHLTSYKVASC SG\CAKILAWTPAGW
5411	1302	289	TGPAALAGKZALGSFKGFSVUTGLRAARRRRTDGAAPAPSVGC GKRRESADAGGGERASVETGSGRGGRTMAGDSBOTLQNHQPN GGEPFLIGVSGGTA.SGKGSVCYAKIVOLLQNEVDYRQKCVVILS QDSFYRVLTSQKAKALKGQVNFDPDAFENELILKTLKEITBG KTQVQIPYVDFVSHSRKESTVTVYADVVLFEGILAFYSQBR/IR DLFQMKLFVDTDADTLRSRLVLDISERGRDLBQLLSSTLRFPV KPA\PERFCIPPKKYAIVIIIPR\GADN\RVPIINLIVQHIQ\DI LNGGPS\NRQITNGCIANGVTPSRKRGASSSSRPH
5412	3180	313	QQINFPFKRANFWTEVSGYLISPLRSPFVDPALNLSMASPWN KMGESSRPEIHTFVSDKKKKKKCSIHKERRPQGHSHETFRDSILV NEQSQITRKKKKKDFQHLISSPLKKSRICDETANATSTLKKKK KERRSALVDEBAQVTVLVDENINTNPHFRFDDVPCVDMSS IRQKLPK\PKTKDFQVLAKSHAKSKALASVKREKKKKKQKQ KAASWESGRA\RD\LPQSEFPTQSESLSVGQGGRTTLP\ASA HNKSEKKKKKKSNREYET\LAMPBESQAGREAGTDQRESQPTV GLDDETQOLIGFTHKKSKKKKKKKSNHQEFESLAMPBESQVGS EVGDMQBS\RPAYGLHGETAGIPAPAYIQHSGYKKKKKKSNHQEF EAVAMPRESLESAYPBESQVGS.EVGTVEGSTALKGFKESNSTKKK SKKKRLTSVVKRVRVSGDDFSVPKNSSTLFDSEVGDMGAMMEG VKSRPRQKKTQACIASKHVOEAPRLEPANEIHNVEAEDSIRY LSADSGDADSDADLGSVAVQLQRFPIPNIKDRATSTIKRMVRDD LERFKEFKAGQVAIKFGKFSVKNKQLEKNVEDFALATGIESAD KLGYDRYPBESVITNLKKRYSFRLHIG\RNATRAPFKLLIYYRA KMFVDNNTKRYVSRGTCKSLKMXHLLGNDKTIQDHWARRSL SVALKESQISQENRGASKSEBRLKLLKAVSEVLEHSGPCEBK EVDKILQNPBESCLGIVRKELXKISNVTFAKVQTRHNWCKCS KWTLLTERTMTNGRRIYQGNALRAKVSILBRLYIINVECTNRI DWEDLASAIGDVPPSYVOTKFSRLKAVYVPQNKQKTFPIIDVYL YRTTLP.LLKKRLKMMKKGTKIQTPAAPQGVFFPRDIFYYEDD SEGGHKKRKRKRPRRHPANFTPIVPIVLEKAGWNI
5413	3753	1304	RPPAGVAPRRAMNVSKVSGRGRDDFRAAPLIRERTARPGGG TPLLNGAGPGAARQSPRSALFRVGMHSSVKLDDLELPE\DMDDPP HPPFKKIPHNKSLLSLYKESLDYDENSEOLPLEERRINETAATR TVRIKRWICALIGLITGLVACFIDIVVENLAGLKYEVIKGNID KPTRKGGLSFSLIMATLNAAPVLVGSVIVAFIEPVAAGSGIPO IKCFANVGI PHVRLAKTLIVKYSGVILRVVGGVLAVGKGPMLH SGSVIANGTSQSRSTLKRDPKIPKILRDEKTRDPVSGAAGAG VSAARPAVGVGLFSLRERAGSPHNOFTWRTPASG\STVILAF VLSTYNGMMDLDSGLINFRSGRDSMSYTHRIPIFVETVETV GGVIGAVPMALNNYLTWIRIZYTHRCPQLQVIRAVLVAAVTAATV FVLLIYSSRDCQPLQGSMSYPLQLFCADGTSNMAAFNTPTEK

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			SVVSLFHPDPGSSYNPLTLGLFTLVYFFLACWYGLTSLVAGVFTP SLLIGAWWRGLFGISLVSYLGAIAWADPKYAMGAAAGLGGIV RMTLSLVTHMEATSNVTVGFFIMLVMTAKIVGDVIFGLYDM HIQLQSVFPLHWEAPVTHSHSLTAREVMSPTVTCLEPRREKVGIV VLLSPTASNNPPVTHADDPQARLGLTSLRSQIVLLGKHV FVPSHMLGVQRILRLKDPNDAYPRPPIQSHVSGQRETCMD LSEFNNPSPTVQDASLPRVPLFRALGRILVVDNRNQVGS LVTRKDLARYLRKGLSEISLQGT
5414	2130	390	GVASANDRALFSPILLSPTSRVFTSDPRCVSTFGRRNRARVPS QWCSVLQGLKLPVSGRTSLACVRSILSPASSPKVGIVGQGAR AGAAPRDEHGRVRRHPPSARRMTRTIGQCLAFRCQGPCTRSP RSRPSRTRRGCSASPAFLP/CRSALI VAVLCYINILNYMDRFTY AGVLPDIEQFPNIGDSSSLQITVFISSYNVLAIVFGYGLSDRYN RKYIMCGGTAFMSLVTLGSSFTDGEHFWLLLLTGLVGVQKASY STIATPIADLPVADQSRHLSIYPFALPVGSGLYIAGSKVKD MAGDHWALAVTPGLGVVAVLLFLVVRPFPFAGVERHSDLPPL NPTSHWADLALARNFSPVLSSLSGTAVAFVIGSLALWAPAFLL RSVFLVGTTPCLQDSSSSSSSLIFGLITCLTGVGLVGLVGL SRRLHNSPRADPLVCATILLGSAAPLPLGLACARCAVATIF IPIGETLLSNWNAVADILLVYVPIPRKRTABAPQIVLSHLDG AGSPYIIGLISDRIRNNPSPSLSEFRALQFSMLCAPVGLAGG AFLGTALHLH
5415	693	2986	IPPKTKLQKH/LTILT/NOBOATFIEEYOMLRPNRKNENEL IISFLRLCPBKQKEHIIHIGEMKQTSQMAENIGSLEPSPATRF RLMLNCAKRSILTESLESILSRGNQARGLQHSISVLDSSLS STLNTSKESPVCKEALPISSEFFKLLGSSDLSDESHEHLE EPALFPOQAFRRANTLSHPTIECQEPQPARGSPGVSRKLM RYHSVSTETPHERKDPESKANHLDSGGTTPVKTIRHSGRQQIFL VRAIFQACDSSSRYPDYSELGELFSPRLPFCEDGPFPGPPPE EKRTSRELRLWQALILQILLRHEKNQRLQASENDLNNKR LELDYESITCLKEVTVTWKRLTTPGRSKIKEDMERKMSAVGG GVPRHHKGETWFLAEPFLKHQFPSSKQCPQVPIYKLLKQLT SQQHALILDGRTPTPHYFSAQIAGQQLSYNLIKAYSLLDQF VGVCQGLSFVAGILLHMSSEEAFFKMLFMDMDGLRKQYRPM IILQIQNYQLSKLLHDYHRLNYLHSEHIGFSLYAFNFTMTF ASQPLGPFVARVDMIFLQGTVEYLFKVALSLLGSHKPLILQHEN LETIVDFIXSTLWNLGLVQKEMTINQVFEMDIAKQLQAYEVEYH VLQRELIDSSPLSDNQMDKLEKTNISLRKQNLDLLEQLQVANG RIQSLBATIEKLLSSSESKLQAMITLSELSALLQTVEKLRRRS AKPSDRRPECTQPEPTGD
5416	27	4074	KSQLFCAGGKAGDILSDQDQKQDPPYFVETPYGYQLDLPLK TVDDIGKNTIKRLNIQKRKKPSVCPPEPTTSQGGIINTSTES LSSSMSDDNKQCNFLIARSQVTSPTISKFPPELTSLPFTITP ENRQLPFPSPQPKENLHVTKLWETRLPGERATLQVGLTASR RRPLASFGMGQTTSSLDSPFVGSCHNPNRKLQAGQCNQDQ SYADAAPTSSMCCSIIRHSLSSGISTFTVNVSPNHLQIHRQW ALAKRLKELERQVRTIPVLQVKISVLQEEKROLVSLQANQRAA SQINVCVGRKRSYAGNASOLEBGRARRSGGLYIDYKEEME TVEOSTORIKSFROLA/TALMOALEQKIQDSSCASSLELRENGEC RSVAVGARRNNNDIVVYHGRSRSCKDAVGLTVENNRCCGVSTE AMLVNTEADKIELQQQTIESLKEKILYRLVQLRETHDREMT KLQELCAAGSRKKVDKATMAQPIVPSKVVEAVVCTRDQMVGSH NDLVDTCVGTSVETNSVGISQCPCKNKVVGPELDMNWIYKER VEMHRCRAGRSVEMCDKSVSVSVCTGTSNTEESVNDLTLTKT NMLKEVRSIGGDCSDVDVTVSPRECASSRGVNTAVSGVEAAV NAVPTKAPDQTSDDLSEOWHPTIKIKATILKSUNTCULSTLDQK TSVIVVETTVVANGIRVEDINSKSTRSIGVDTLSCSGFGR PSAVTKESGVGQININDYVGLKQKMTACQDPLCVGLTASR RSVGVGDDPVGSELANPQPARALNMVCTLDIHYERIKQLLACQ TLAENYSELARAFGEPIHQAGSINSQISTIASINSVMKASST FEIENDDPQKTSIGKITGSYLGTVCKCGGLSGSPLSSQTSQEE

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5417	27	4074	QRVGTSEGGKPISSLDAPPTQEGTISPVNLTDDQIAAGLYACTNN ESTLKSIMKKKDGKNDKNGAKNQLQFVGINGGYETSSDDSSSD ESSSSSDDECDVIEYPLEEEREDEEDTRGMAGHGHAVNIEGL KSARVEDEMQVQCEPEKVEIRERYELSEKMSACNLLKNTIND PKALTSKDMRFLNTLQHEWFRVSSQSAIPAMVGDYIAAFET SPDVLRYVINLADGNNTALHYVSHSNFETIKLLDLADVCNVD HQNKAGYTPIMLAALAAVEABKDMRIVEELFGCGDVNAKASQAG QTALMLAVSHGRIDMVKGLLACGADVNTQDDGSTATLMCASEHG HVEIVKLLAQPGCNHLEDNDGSTATLALAGHKDIAVLLYA HVNFAKAQSPGTPRLGRKTSFGPTHRGSFD
5418	24	1133	KSQLFCPIGGKADITLSGQDKEKQPPYFETPVGQLDLDLFLK YVDDIQKQNTIKRLNLIKRRKSPVPCPEPRTSSGQGIWSTES LSSSNSDDNKQCPNFIARSOVSTSPISKPPPLPETSPLFLTIP ENRQLPPSPQLPKHNLHVTKLTMETRRLEQERATMQNTPGEF RRPRLASFGWGTTSSLPFSVGSNNHNPAGHQLNGYQNGNDYG STADAPAFITSSMSSIRHSPASSGISTPVTNVSHEHLQHTREAP ATALRLKELESQVURTIPVQVKISVLYGSEKRLVSLQKMQRAA SQIDVQVRRKSYSMANASQLOEISKARISGELIYDIESSEME TYEGSTORIKERFQLTADMQALEQIGDSCSSASGLVQVQEC RSVAVGARENMDIVVYHGRSRSCKDAVGTVMENRCVSVTE AMLGVMTRADKELEQQUTIESLKEKIVYLEVQLRETHRDREMT KIKQELQAGSRKKVKATMAQPLVPFSKVVEAVVQTRDQMVGSH MDLVTCVGTSVETNSVGISQCPCKNKVGPPELWNWNIKVER VENHDCRCGRSVMCKSVSVSVSVCTGNTSESVNDLTLLKT NLNLKEVRSIGCGDCSDVTVCSFKBCASRGVNTSAVSQVEAA MAVPRTAQDQSTDLQVHQFTNTATLIESCTNCTLSLQKQ TSQTQVETRTVAVGGRVKDINSSTKIRSIGVGLLGSQSGFDR PBAVTKESGVGQININDNVLGLKMRITACGPPQITVGTASR RSVGVDDPPOBSLHNPQQAFLGEMTGLDHYTIERQLKLLASQ TLLANYSILABAPCPHSGQSLNQLISTLSGINSVNGKASST EELHNDPQKTLGKTOSVLEYTKCCQGLQSSPSSQTSQPE QRVGTSEGGKPISSLDAPPTQEGTISPVNLTDDQIAAGLYACTNN ESTLKSIMKKKDGKNDKNGAKNQLQFVGINGGYETSSDDSSSD ESSSSSDDECDVIEYPLEEEREDEEDTRGMAGHGHAVNIEGL KSARVEDEMQVQCEPEKVEIRERYELSEKMSACNLLKNTIND PKALTSKDMRFLNTLQHEWFRVSSQSAIPAMVGDYIAAFET SPDVLRYVINLADGNNTALHYVSHSNFETIKLLDLADVCNVD HQNKAGYTPIMLAALAAVEABKDMRIVEELFGCGDVNAKASQAG QTALMLAVSHGRIDMVKGLLACGADVNTQDDGSTATLMCASEHG HVEIVKLLAQPGCNHLEDNDGSTATLALAGHKDIAVLLYA HVNFAKAQSPGTPRLGRKTSFGPTHRGSFD
5419	1395	259	GTHPLDPLVSRISVQGLPITWACPGMSDITESFPLGPRALBEG SESRACRAPHORRKEEERRSDTSFGFRSRKHVWKKHPERADA KDPASFC/LGP/DCVPAQPSSTKYCSDDCSKMLAANRIYEIL PQRIQQWQSPCTIASBHGKILERTIRREQSARTRLQEMERRFPH ELEAIILRAHQAVRDEESNEGSDSDTDLQIFCVSCGHPINPR VALHMERCTARTESQTSBGSMTYFRIEAGATFLCDVYVQSKK YCKGLQVLCASRSDRPKADVCGCPGLVDVFLTSGDFCRLPK RCNRRHYCCKLARAVDLERVVYKLOLFEQERNVTRMTN RAGLLAIAMLHQTICHDP/TTDLRSADR NEAGGACFPKGGASGRIVYLSPELFRVSVAGCERPLQNVVLEG GGFLPAPPRQAQRRLGFSHAQGSMAFDYEVLSVREQLPHERIR

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			ECIISTLLFATYILCHIFLTRFKKPAEFTTGMKMPFSTRL/LLELCCTFTLAIAGAVLLLPFSITSNEVLLSPNYYIQWLNGVLIHGLNINVLFSMLSLIFLMPFAYFFTSBGFAGSRKGVIGRVYTVVMMLLTLLANWWSAIVDKANKRESLIDFWEYITLPIYLYSCISFLGVLLVCTPIGLARWPSYTKLIVKRLLEDLEQLYCSAFEEAALTRICNPTSCWLPDLWELHLRQVLAQTORVLEKRRKASAWQRNLGYPLAMCLLVLTGLSVLIVAHILELLID EAMPRNGQTSLGQVSFSLGSFGAVIQVLIPLMVSSVVG FYSSPLFSLRPRHNDTAMTQIIGNCVCLLVSSALPVFSRTLGL TRFDLGDGGRFHWLGNFYIVFLYNAAFAGLTTLCAVKTFTAARAEILIRAPGERE
5421	117	1733	NEAGGACPFKGGASORLYLSPELPRVSVAGCEERPLGHWVWLG GGLFPAAPRAQRHIGFSHAQSGNEADPYEVLVSRQLPHERIR ECIISTLLFATYILCHIFLTRFKKPAEFTTGMKMPFSTRL/LLELCCTFTLAIAGAVLLLPFSITSNEVLLSPNYYIQWLNGVLIHGLNINVLFSMLSLIFLMPFAYFFTSBGFAGSRKGVIGRVYTVVMMLLTLLANWWSAIVDKANKRESLIDFWEYITLPIYLYSCISFLGVLLVCTPIGLARWPSYTKLIVKRLLEDLEQLYCSAFEEAALTRICNPTSCWLPDLWELHLRQVLAQTORVLEKRRKASAWQRNLGYPLAMCLLVLTGLSVLIVAHILELLID EAMPRNGQTSLGQVSFSLGSFGAVIQVLIPLMVSSVVG FYSSPLFSLRPRHNDTAMTQIIGNCVCLLVSSALPVFSRTLGL TRFDLGDGGRFHWLGNFYIVFLYNAAFAGLTTLCAVKTFTAARAEILIRAPGERE
5422	3	1263	SCGESLPTWLAGASRPTGRKGGAWSRGSSPAQVLLSEGPVFKAGCNWHLSDQAGVQRCDLGSQPPGLGFRFSCLSLPSWD YRSTVLVCSKMEADLSGFNIDAPRNDORTFLGRVXHEFLNITDPR TVFVSERELDVAKVMVKSRSRGVVPFGTQVQLYAKKLYDSAF HDTGGRKMNIGRMSFQLPGWMIITGFWLQPYRTMPAVIFQWV NGSFALVWYTHWNAASPTVWQALSYFTACTTAVATVGMNM LTKAPPLGRWVFAANVAANCVNPMWQKLTGKGVKDN EMEIGHSRAAAGITQVVISRTITMSAPGKILLPVMERLEKHL FMQKVVLV/SAP/LQVMSGCFIFIMVFPVAGGLPQKCELPVSYL SPKIQDTIKAKYGELEPVYVFNKGL
5423	3186	905	GVSMALGEEKABARASEDTKQSYSGRGSCKRREKLDIPGPMGBQ PPRLEARGGLISPVWGAEGIPAPTCWIGTDGPGPSRAHQPOASD ANREPVAERSEPALSGLEPPATMGSGDILLSGESQVETKLSSE EFPQTLSLPRTTICSGHDADTEDDPSLADLPALDLSQQPHSSG LSCISQWKSVLSPGSAAPQSPSCISASSTGSSQLGHQERAEPRG GSLAKVSSLEPVVPQEPSSVVLGRPQWSPQPVPSQGDASGL GRRLLSFQARYWACVLPDLSPPSDRHSPLNNPNKRYEDLLDYT YPLRPGQLPKHLRSVPADPVLDGSDGVLDSPSVSPASTLKSP TWSPNCPPARATALPFSGPREPSLKQWPSVPQKQGGHGLASW SGLASTPRAPGSADARWERRDPAKRAEDRTTIGHLDWGSGL RTDRGWPSRPRRERKTSQARRPTCTESRANKSEVESDSEY LALPAKLTQVSSLVSYLGSISTVLPLPGIDIKQSPLEVSDBG PASFPPSSSSQSLPPGAATQSGDGPQGNPCFLRSFVRHDSAG EGSLSGSSQALGVSSGLLKTRPSLPAKLRWPFSDPVEGQLPRK GEGQGESLVQC/VKTFY/COLEELICWLYNV/ADVTDHGTIPAR SNLTS/LK/SSILQYLRQPKKIDTRHQSTRSVLQKGTILQCLLE NTPVLEDVIGRIKQSGRLESHADRLYDSTLASLDMAGCTLIP DKKPMAAMRHPCEGV
5424	3186	905	GVSMALGEEKABARASEDTKQSYSGRGSCKRREKLDIPGPMGBQ PPRLEARGGLISPVWGAEGIPAPTCWIGTDGPGPSRAHQPOASD ANREPVAERSEPALSGLEPPATMGSGDILLSGESQVETKLSSE EFPQTLSLPRTTICSGHDADTEDDPSLADLPALDLSQQPHSSG LSCISQWKSVLSPGSAAPQSPSCISASSTGSSQLGHQERAEPRG GSLAKVSSLEPVVPQEPSSVVLGRPQWSPQPVPSQGDASGL GRRLLSFQARYWACVLPDLSPPSDRHSPLNNPNKRYEDLLDYT YPLRPGQLPKHLRSVPADPVLDGSDGVLDSPSVSPASTLKSP TWSPNCPPARATALPFSGPREPSLKQWPSVPQKQGGHGLASW

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5425	1086	115	<p>SQLASTPRAGSRCDARWEREPALRGAKDLRTIGKHLDMSSPOL RTRDRGWSPFRPRERKRTSQSARRPTCTESRWKSGEEVESDDEY LALPAKLTQVSSLVSYLGSISTVLTFTGDIKQGSFLEVSQSDG PASFPSSSSQGLPPGALQSGSDPQGNPCFLASFVAHDSAG ESGLSSQALGVSSQLLKTPLERALELWPFSDPVEGGPRK GGGQKESLVQC/VKTFC/QLEELIKLWLV/ADVTGHTPAR SNLTSK\SSGLQVRQKKIDDEHQSUTESVLQKGEILLOCLE NTPFVDLVGRIAKQSGELESADRLYSILASLDMAGCTLIIP DEKPMAMMEHPCEGV</p>
5426	42	3435	<p>ATSSQSLCRADFPKGTTHESFGGSGSPSSMDQSFAPSDPTDQ PAHAKPQSGQAGCGAGGALANLTSFGRLNLIPIVYLA GAVLSVGKFLPGLALYLGHRVRDEKESLRAARQLLDEEQL TAKTLVMSHRELPAWVSFPDVRKAEMLNITVAQVWFFLQYMEK LIAETVAPVRGNSPHLQTFFTFVELGSEKPLRIIGVXVHPGQR KEQILLDLNISYVGQVQIDVEVKYFCAGVKGNOLHGVLRVIL EPLIGDLPFVGAVSMFPIRRPTLDINMTGNLLDIPGLSSLS TMIMDSIAAPVLNKLILVLPVLDQVQLRSPLPGIIRIHL LAARGLSSKDKYKVLIEGKSDPYALVRLGTQTFCSRVIDEELN PQWGETYVMVHVRPQGEIRVEVDKDPDKDDFLGRMKLDVGKV LQASVLDNWPFLQGGQGVHLREMLLSLSDAEKLEQVLQWNNW VSSRPDPSSAAILVYLDRAQDLPMVTSELYPPOLKKNKEPFP WVLSIQDVYKASVNSNCPWNEAFRFLQDPQSGELDVQV KIDRALFLGALTPLARLLTAPELLQWQLSSQPSRLIM KLWRLVLDSEICPTFVPGCPAWDVDSERTPGSSVDAPFR PCHTTDPGQGTGTHVLRIHVLEAQLIAKDRFLQGLVKGSDDPY VKILLAGRSFRSHVRREDLIPRNNEVFIVITSVPGQLEVEVF DKDLDDKDFLGRCKVRLTIVLNSGFLDEMLTLEDVPSGRHLRL ERLTPRPTAAREELVQVNSLIQTQYSAELAAALLSIYMEBAED LELEKGTTHLSFYATVITGDSHKTKTISQTSAPVNDASASFLI RKPHTESLELOVRGEGTGLSLSPLSELVADQLCDRWFPL SSGQQQVLLRAQLILVSHQSGVANSISYSSSSSISEEPFLS GGPHITSSAPEV/RQLTHVDSPLAPAGPLQVKLTLYWYSE ERKLVSIVHGCRSLRONGRDPDFYVSLLLLPDKNRGTKRRTSQ KRTLSPEPNERFENELFLDRAQRRLDVSVKNSSSPMSREEL LQKVLDELRTLSQGVARVLDLMDNKKSS</p>
5427	42	3435	<p>ATSSQSLCRADFPKGTTHESFGGSGSPSSMDQSFAPSDPTDQ PAHAKPQSGQAGCGAGGALANLTSFGRLNLIPIVYLA GAVLSVGKFLPGLALYLGHRVRDEKESLRAARQLLDEEQL TAKTLVMSHRELPAWVSFPDVRKAEMLNITVAQVWFFLQYMEK LIAETVAPVRGNSPHLQTFFTFVELGSEKPLRIIGVXVHPGQR KEQILLDLNISYVGQVQIDVEVKYFCAGVKGNOLHGVLRVIL EPLIGDLPFVGAVSMFPIRRPTLDINMTGNLLDIPGLSSLS TMIMDSIAAPVLNKLILVLPVLDQVQLRSPLPGIIRIHL LAARGLSSKDKYKVLIEGKSDPYALVRLGTQTFCSRVIDEELN PQWGETYVMVHVRPQGEIRVEVDKDPDKDDFLGRMKLDVGKV LQASVLDNWPFLQGGQGVHLREMLLSLSDAEKLEQVLQWNNW VSSRPDPSSAAILVYLDRAQDLPMVTSELYPPOLKKNKEPFP WVLSIQDVYKASVNSNCPWNEAFRFLQDPQSGELDVQV KIDRALFLGALTPLARLLTAPELLQWQLSSQPSRLIM KLWRLVLDSEICPTFVPGCPAWDVDSERTPGSSVDAPFR PCHTTDPGQGTGTHVLRIHVLEAQLIAKDRFLQGLVKGSDDPY VKILLAGRSFRSHVRREDLIPRNNEVFIVITSVPGQLEVEVF DKDLDDKDFLGRCKVRLTIVLNSGFLDEMLTLEDVPSGRHLRL</p>

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			ERLTPRPTAARLEVLQVNSLIQTKSAELAAALLSTYNRAED LPLRKGTHKLSPYATLTVGDSGHKTKISQTSAPVWDESASLI RKPHETSLQLQVROBGTGLVLSLPLSELVADQLCLDRNFTL SGSGGQVLLRAGLQILVLSQHSQSVAMSHSYSSSSSLSSEPELS GGPHITSSAPETVARQLTIVDSLEAFAPAGLQGVK/TLAYTSE ERKLVSIVGCGSLRQWGRPPDPYVSLILLDDKNGKTKRTSQ KKRTLSPETNERFEWELPDEAQRRLCVGVKSSSFMSSREEL LGKVLDAETDLQSGVARNYDLMNKKSS
5428	3	1839	SSSRERLSACAIAPPVLSRRPAPACQPPKQVVDGASLEED LVHFSVSLPSRGYGVMEERIRQKGLCDVTLKIGDHKFSAMRIV LAASIPYPHAMPTNDMMCKQDEIVMGMDPSALREALINPAYNG NLADIQNVQSLKMGASFLQQLSIAKACCTFLRRLHPKNCILGV RQFAETMCAVLYDAANSFIHQHFVSVMSSEFLALPLEDLIEL VSRDELNVKSEEQVFEAALAMVRDREQRTFLRNQSNRIEL FCRPQFLSDRVQDDLRCCHCKRDLVDEAKTYLMPERRPHLP CRPFRPRCCTSIAGLIYAVGLNSAODSINNVVFPDIPANCWER CRPFRPFRSRRGVAVNOLLIALYGGVDQQLSLTQVANTETDT WTVGSHASIKAMCTVYVLDQITVSGVYHNSLSVSTYSPE TDVNTVTSMSNSRSLA/GVTFGRIVVGGHCLQIFASVSH YNHHTATWHPANMLKTRCRGASASLGGKVPCCGYKSGPLI AMYSSTVADQNCILVPM/HTRR/RSVSLGGAVRGLYAVGWT TQSNLS/SSVGDLVTFETDCNTFM/APMACHEGGVGVGCIPLLT I
5429	828	202	RRREDALSSSEGCLMPSESTVSGNGIPEQVYVAPPTDRLAVDPF AQERFHRFQPTPYLQHEIDLPPITISLDGSEPPPPQGPCTLO LRDPEQQLNELNRESVRAPPNRTIFPSDLMDSARLGGPCPPSSNS GISATCYGSGGMEGPP/TVSEVIQHYVSGSSPQQSSGPPSL LEGTRLHHTHIALPSSAAIWSKEDQKQKHL
5430	441	1507	QKRKRKRKINKTIQPKHNSISWAIPTGLAALCLFGQVPS GDAFPKAMDNVTVGQGESATLRCTIDNRVTRVAMNRSSTILYA GNDKCLDPRVLLSNRTQYSIEIQNVVDGEGPYTCVQVTDN HPKTSRVHLVQVSFVLSGDSIDNBNISLCTIATGSRP TVTNRHSIPKAVGVP/SEDEYLETQGTITRQSGDYSCASPLA APV/VERVKVTVPYPISEAKITGVPGQKQTLQCEASAVPSA EFQWYKDKRLI/EGKGVKVENRFFLSKLIFNVSEHDQNVY CVASNKLGHNTASIMLPGAVSEVSGNSTRRAGCVNLLP/LVL HLLEKF
5431	2	1312	AAAPGSRKRRLPDRPHMAGYEAPFPAPSPAPWARRSKPV/ LPGITINP/VIAGPSP/TSBGASRANLVDLQKLEELDEDOQ KKRLAFLTKAKVGLKDDDFERISLGAAGNGVVTYVQHRPS GLIMARKLTHLSIKPAIRNQIIRELQVLEHCNSPYIVGFYGFY SDGEISICMHHMDGSLDQVLKKAIRIPEELGKVSIAVLRLGLA YLREKHQIMHRDVKPSNIVNSRGEIKLDCPVGVSQGLIDSMANS FVGTYSYMAPRLQGHYSVQSDINSMGLSLVELAVGRYPIPPP DAKLEALFGRPVVDGEGRPHSISPRPRPGRPVSGHMDSRP AMALFELLDYIVNPPPKLANGV/TFDQEFVVKCLIKMPARA DLKMLTNHTFIKRSEVSEVDFAWGLCKTLRLNQCPTXTATV
5432	2	1312	AAAPGSRKRRLPDRPHMAGYEAPFPAPSPAPWARRSKPV/ LPGITINP/VIAGPSP/TSBGASRANLVDLQKLEELDEDOQ KKRLAFLTKAKVGLKDDDFERISLGAAGNGVVTYVQHRPS GLIMARKLTHLSIKPAIRNQIIRELQVLEHCNSPYIVGFYGFY SDGEISICMHHMDGSLDQVLKKAIRIPEELGKVSIAVLRLGLA YLREKHQIMHRDVKPSNIVNSRGEIKLDCPVGVSQGLIDSMANS FVGTYSYMAPRLQGHYSVQSDINSMGLSLVELAVGRYPIPPP DAKLEALFGRPVVDGEGRPHSISPRPRPGRPVSGHMDSRP AMALFELLDYIVNPPPKLANGV/TFDQEFVVKCLIKMPARA DLKMLTNHTFIKRSEVSEVDFAWGLCKTLRLNQCPTXTATV
5433	360	1885	SVGQKQVFEEDPLHCSWRACRCPVW/C/CGHLLCIGFAGV LRSWLSLVVFKNDYFKELGSDG/IGNATGQACNAQDERP SLIFTIAGSSMMNFTFTGYIFDRFKTIVARLLAIFYVITATLI

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			IAFTSAGSAVLLFLAMPMLTTGGGLPLITMLTGNTFGQHRSTI ITLYNGAPDSSSAVFLIKLLYKGISLR/VLLHLHLCLQYLAC STHFFPDAPGANPIPTAPOLQMPVPWEWHHKGREG/QQLSMKT GYSYQRSSPQRKRKPGQGRSRNAPSAGATL/CRRFAMHLVWL SVLQKHLYPLTGLNLSLTWAGGDMARVSTYTMFAPTQFGVVL CAPNWLMLDLKLYKRYKBARITQSSSTALVACSTYSLALNTSL LCLGFLCASVPILPLQVLYTFLIAGYISRSTYKSNASFLTAF SEHPGKLPGLVMAISAVVSLQFPITFLIKGSLQNDPPYVWVF MLAILLTFPHFPLVYRECRTWKESPSAIA
5434	66	652	RYAALITSLYQKLLNRRNHCRCSTVMSPAQAGLNMILF/GSGK HGPFGLGCSQYACDYVRPLKSSADGHIKVLGGVCPACAGNVLQ LGRGRPGMFIGCINYPECEHTELIDKPEATAITCPCQRTGHLVQ RRSRYGKTFHSCDRYPEQCFAINFKPIAGECPECHYPLLIEKXT AQGVKHFCAKQCGKPVSAE
5435	4704	1597	PGDSSORLAEMSNAKERKHKMMNPNPTNVLSSGFPVADRGVH HSGGKFPQAQKEPHPGTSRQORTRVNPHSLDPENVTQSSSK GNPKRKGSGWCAPEGSTSQEIPKITYTASTFAQAAEISAMLKAV TVKSSNLVPTLFRHMRHARSANHVKLEPRLOQCAKEAKFA VQXKSEHMKCHKABRCHNMLTELEBRKQVLETHIWLAK RPHVVKMGYCLGERTPVKSHACVPMYTRCLLQVLSFCCLE LKGEKEITLKAESMCNIDTGLTFAAVHCLSGSKQGSNLVLYN KYPREMLGPVTFINKSQRTPGPSESQRLMILAPTLKQDILIE IKAAQCVEPIKSAVCIADPLTPSGEKSQSTELPDEKIGKRRKR KDDGENAKPIKIKIDGDRDPLCPSYWSISPTGIIISDLTMENN RFRLIOLPSHSLTAIKAAASVHTVGEDETEEPHRNNITCKPK DSVSLHCRQEAIFELGGIITSABIPAGTILGLTVGDERIMLPQ KSKALPNPEKQDNKVRQLLLEGVPEVCEHSPFNODICKSV TENKISDGLNMRMSBELLVFGSQLIGPHEKSPILLIQQPKV TSGDRLOWSGNDVLLPKNGSGAFMFPFIRGVREVGKLKESAVH SCYKRSFNVPGDPDPCAGMLPABEAGNLTLEKRRPFAKRN YVKLGLTAPCCPWEOLQDNBESVOAYEPEVASSENKESDL RREVEPCAMPKKTCHQPSDEVGTSIEHVPAREAEVMDAGQESAG PERITDORASENHVAATGSHLCVLRXKLLKLSANCPSSSEDS RGRRAPGRGQQLTREACLSILGHFPRALVNVLSLLSKGSP PHIMICVPAKEDPLQLEDHWHYCPQBSKHSDFRSKILKQKEK KKREKRQK/GRASSDGPAGEEPVAGQBALTLGLWSGPLPRVTL HCSRTLFGVQTDGFSMAVGEALGFVSLTGLDMLSSQAPAQ RGLVLLRPFASLYRFARIAIEV
5436	1781	635	ASDSIPWSEARTTKLQRGQGNLSLPERMPLVFCPLPSYQSKR RAEKLVALAABGRAVYVDDAVALGAEDPAVYDGAAREKALRG ALRASVYBRRLSHDVLVLSLIMYKGFVLYL/CLARAARTFLC LVYCVDPGPPJAGPQPMANENPENVSYRSHREEDGSAQA GSSVLEAFHTADSVNNGSADNPVKELREBSSGARSPLVTFD SEKSAKHGSGAFYSPELLEALTLRPEAPDSRNDRPLTTLVGL EEPLPLAGIRLSALFNRAAPPHQSTOSQPLASGSLHQLDQVTS QVLAGLMSAQKSAVPGDLTLPLGTTEHLRFTRLPTWAELSRLRR OFISYTKMHFNENMLPQLANMPLQYLQSLH
5437	739	1672	CQEAASEFGSLPHTNMFILKRLGGVLPDPWRRKRNPRPDPTPE PRRVDSSENSSGSDNSAPETMRDVGPKTKDGGALVRRAASE PSKEBFOVBQLGSKMDSLOWDPTSTSTQBSGRLEAGGASPKLR WDHVSDDGTRRPGVSPBGL/GVPGPGAPLEKPGRRKELGLWLR GEPGAPSRYLGGPCECTISNTLTHLELLASADLALCSRPLR AALDTGLRGPFGIWLHGLLSFLAALHGLHVLISLTLTAHPLHFA CLRGLLQALVLAISLRPEPNGDEAATDWSSEGLREBEGSGRDGPG KGL
5438	2443	1152	TKPKRRHQPASQQRPFSSSDTGCLLAGKQKAEKNGSDQVS LAPPSLERPMQCSBARQGPPLRAAKMLHFLQALRRRLQGLCS MSRPAKLKRSNPLTVLYLLPQALRPLSRVGNRPVSRVAYLKS VPTRLRSWAGRLNQVRLPWLRRPVYSLYITWFGVNMKEAAVE DJHHYKLSSEFFRKLLQARPVCGLSHVSIPSDGRILMFGQVK NCEVQVKGVTYSLSFLGPRMCTEDLPFPFPAASCSDFINQVLT

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5443	66	1003	SRGQLDAGQSSRQHGNNRQPGQSRSSSSSSSRSSSSAAEFA MALSMPLAGLKKEDEKPELILSLFVKGASDGSIGNCFPSQRLFMV LNLKGVFVSFTVQLARPADQLQMLAPGTHPPFTITNSVSKTDV NKIEFPLEVLPCKPKYKLSPSHDSNAGMDIARTSAITNS RFEANEALERSLKTQLQKDFVLSPLFDEIDRISWDIKPETER KFLDGNEMTLADCNLPLKLHIVKVAKYRNFDPKEMTOINRY LTNAYSRDEFTNTCPSDKEVEI\AYSIDVAKRLHQVSRLLKEVS FMSSP
5444	2	344	SGPIGTGAGMAKMLRDYLSFGRRPPFPPTPDYTESDILRAY RAQKMLDFEDPY*DSERLEPDPAGPGDSKNGDAKYQSGKIRL IKVEAADMARAKALGGPGELEADTEYLDLPDQAPHPAPDDG YMEPYDAQVMSELPGRGVQLYDTPYEEQDPEADGPPSQKPR QSRMPQEDERPADEYDQPSWKKHILSRATVQDPSPEWERTPG SAKELRPPPSPOPAERVPDAPLPLEKQPHFGPINRADASLL SLCKGESYLVSETNPDQCSLSLRSSQGLFLHFKFARTRENOVV LDQISQCFPSVSRVLHVSRRPLVPGQARHALLIYFVVTQTP*Q *PDGDRPRGQVATLPELWAGACALP*SALESGLERHPSGLP RAKPKPLRGLPLGLRPLRAGRPGPKLQEPFRQCVWFSQAFH CGGCGYGGSQSGPSGRPRGAGSRH
5445	2364	486	ILSRGFLGASVEICQLPLPASEPVLILLWARRNRRETSREPT TLRAQSVCPNWI*ETRMNRSIPVEVDESEYPQLKPIFYSP EESESPAPNINENMAPNSISAPTMLHNSGDFSQHSTLKLANH QRVPSQVTCRLTQVLEDSERFCRHRHPLQKAPSGCSAVSEP ASESVVQALPASHQSPMEKRNQMLVQGLSAASPDTHGDSKSD QSLPNASADSLGSGQSMVQRQPHNRAGLDLPTIDTGYDSQPC DVLGIRQLERPLPLTSVCYQDLPRLPSSREFPQFPORYPACA QMLPPLSHAPNWIHYHRCGSPDHQVYPGHYDPRAYAQVQIQP ALPGQPLGASVYGLHPVQVILNYPSPWDGERRAPQRDCSEFG LPRKQDPHQPMPARAKAPESLECPAGLAPQVPPSPFAVPR PSPMPARGTLKTNLPSLRKVPITYSMOTAMEYTKVFNLLV NQPQTADIDFERDRTIDILKMERVLEKCTMIIIVASPKYQ DVEGASQLDEDEGLHPTKYIHRMQIFIKQGSQMFPPVLP PNAKKEHVPTNLQNTHTVSNPNKIKILLRLLREERYVAPRGP LPTLQVPL
5446	372	161	SSWSWCTGMRKRLRLGLLNLMPVSLLEAATMLTERKEYEKEGQ TLVDKYDTLEKFASSQKAMQIIRDSMPKTLACTERPSKNSHP VQVGRILLEDYHDLGLLRVMVNLQVDESGLYQCVIYQPKREH MLDFIRLIVVTGPGSGTPGSNNSTQN\VKIPIPTTKALCLYAT TERTVTQAPPKSTADVSFPDSEINTVTEIIRVPVNIIVILLA QGLFSKSLVESVLPVATLRSFVP*AHETPMSSDFQPHSGSCA KSGRR
5447	207	617	MLAKTLTSLMASLVAYDESDSEANTHAGSENNTOGCKDTSGVAR PPQDDVAGTLDVFKAGQPTKHSCEPQKTYRLPLACIRSDR GSCPSQRLQWPKKQVQVTFPIKESCSLMTSHVASHMPLAA RFKQVKLSRNPFSKSHAQSESTVGKYGSGTQKKCCDCTVPPY TPRRLRQRQALSTETGKGKDVPCQPPAGRAPAPLYVPGVSEF IQPYLHSHYKETTVPKVLPHLRGHHGVPNTIQNCPVLSKSHML LSTMDKTFKVMVAVDSGHCLQTYSLHTEAVRAARNAPCGRRIL SGGDFALHLTDLETCQLFSGRSDFRITTLKPHPKDHNILFCG GFSSEKKAINDIRTKVMKSYKATIQOITLDLFLRBSSEFLSSTD ASTDSADRTI IAMDPTSAKISNQIFHERFTCPSLALHPRBPV FLAQTKGNLYLALFSTVMYPMSSRRRRYSGHKVGTSGVCEBSPG GDLVTSGSADGRVLMYSPRTASRACTLQHTQACVGTYYHVPVL SVLATCSKGGDKIKH*AFHMSLSGAIIDGLAPARGYSPPGRSL KSPSPSKLLVLLQGNAMFQATPCWQPLALSX
5448	194	1833	MRKSVFDATVWYQKIKGYDQIWEKSVSEKRIKGLNKKPKKA HVKEDILDVLDVAGSAAKAKHESPWSTLTGILKGLRPF RMLQVTSKVIKIPMLLIVLQVAAVILFCTSSSHSIFLTVI GPWIMLLIQLTHQCIQVSTRTPKPLSTCGKRRKLLKKAHLEV HREKDGSSSTTNTQEGAVQMGKTSHTSHVGTVFRDLMAAFVLS GSKAKNSIDKSTETDNGVYSLDGKTVKSGEDIQNHPEQCET

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			LLGLSLQVLEPPQKGFQKSDGQKARTLSAFSWRMVEEQLTIRYV HDGSETLIDRQFVLMANASMDRQSHVPAFTVTVLVPVNDQFPIIT THTGLQMWEGATAPIFAEALRSTDDSGSDELAVYITIEQFSGNRRV VLRGAPFTVRSFTQACLDGGLVLFSHRGTLDGGFTFRLSDGHR TDSHEFTVQKQVLLSLGSGCTLTVCPSQVFLSSGCTLRASS SKGTPDQLLYVVRSPQLGRFLHQAQDSTGRLVNTQAEVTA GNILYEHEMPPEPWAHDLELQGLSPFADWATLAVAVSFE AACCPRSHLWKNGLWVPBQQRARITVAALDASNLASVPSQ RSEHDLVFCVTFPSRQQLVSEELHAGQPHFLQQLAAGOLV YAHGGGTQDQGFHRAHLQGPAGSVAQPTSEAFATTVRDVN ERPQQAQSVPLRLTRGSRAPIRAGLSVVDPSAPORTIEYEV RAPHNGFLSLVGGGLPVTRFTQADVDGRLAFVANGSVAQIF QLSMSDGAQPLPLMSLAVDILPSAIEVOLRAPIELVQALGRSS SQQLRVUSDREPEAYRIQGPQGLLVGGKPTSAFSPQFI DQGEVVPFPTNFSSSHDFRLVALARGVNASVNVTVRALLHV WAGGPMFGQATLRLOFTVLDGELANRGTSGVPRFLLEGPRHGR VVYVPARTPEQSGSLVBSQFTQDLEDGRGLGLEVGRPEGARPGP AGDSLELEMAQGVFPAVASLPAFAETPRAPPSVALLSVPEA ARTDAQPESTPTGEPMPMASSPEPAVAGQFLSFLANPVSF IIPNCLVILLALILPLLFLKKKTCGKHDVQVLTAKPRNGIA GDTETPKKVEFGQAIPLTAVPQGPFGPQQDPELLQFCRTNP ALINQGYTV
5451	1	2274	RDSSEQKRTGDTLGRFSAACMDALKPFCLMNNHRRGKCRDSCGR KNSRPGSPHSLEALDAAAPSGQINLTLLPTIMFLIFNPLFSPILP TEALICILTFGAAILFMLITRPQVPLPDLNNGSVGSGGARK GVSGKINDLTSOCFSDACTMYRVRQGLVSDNGPCLGYKRPNO PYRWLYKOVSDRAZYLGSCILAHGYKSSPDQFVGIPAGRRPRN IISELACTYSHVAVPLVDTLGPALVHIVKADLAVICDTPO KALVLSGVRGKFTPSLKVILINDPDDDLKGRGKSGIRLLSL VDANLQKHEPKFPFPEPDLVSIGCTTGTGTDPRKAMTHQN IVSNAAAPLKYTHNYETPDDVALSYPLAMFPRVIGAVVY CGARVGTQDRLDLADNMLTKPTLFPANVRLLRNRYDKVONE AKTPLKFFLLKLAVSSKPKELKQIIRHDSFKDKLFAIQLDLS GGRVRVITGAAPMSTSVMTFPRARMGCVVEAYGQTECTGGCT FTLPGDWISGHVGVYACNYVKLSDVADNMYTVVRNNEGVCIKG TNVFGYGLKDPKTEALDSGWLHTGDIGRLLPNTGLIKIDRK KNIFKLAGSEYIAPRKIENIYNSQFVLQIPVHORSLSRSSLVGV VVPDITVLPSFAKLGKGSFBLQCNQVREAILLEDLQKIGKE SGLKTFQVIGAIPLHPEPFSIRNGLLTPTLAKRGLSKSLYPTQ IDSLYEHITQ
5452	1933	1138	SKVPSLCLSLSLSLSPSREPVAGAGPQCGTAGPAMATLWGLSLR LGLSLSLSLCLALSULLACLSDARKNFEDVRCCKICPPYKRNKG HYNYKNSIQNDCCDMLVPEPMPVSGPVBAYCLRCCEKYEBRS VTHKVTITVLSLGLLLLMVLLTVLVEPLKRLRFLHQAQIQS DDTDGHCQFPAHADVLANRSRANLVNKVETACQKRLQVQEG KSVFDRHVLVS
5453	111	1520	PSIPAAVPSQAPPEHREETVTAATATQVQCPFAAALPAGQAV AGPAPSTVPSSTSKRKVPQSPSLVSGSEEPFPAASGGGGGAKE POERSQQQDDIELHETKAVGMSNIXRFLKFDIETGRGSKFTVY KGLVTETTVEVAMCELQDKRLTKSERQPKFEAREMLKGLQHPNI VRFPDSWESTVKGKICVLVTEMLTSTLTKYLRKFKVMKIKVL RSWCRIILKGLQPLRTPPIIHRDLKCDNFITGPTGSVKIGD LGLVTLKRASFAKSVIGTPEPMAPMEYEKYDESVDVYAFGMCM LENMTSPYSEPCQNAQIYRVRVSGVKPASFDKVAIPEVKEIKI RGCTRQNKDERYSIKDLNHAFFQESTGVRVELAEDDQGEKIAI KLMLRIEILKGLSKYKDKKAIKPSFDLGRKVRPEVDAQHMEVSG VYCBGDKHAKAIKDRVSLKRSKRGGL *
5454	111	1520	PSIPAAVPSQAPPEHREETVTAATATQVQCPFAAALPAGQAV AGPAPSTVPSSTSKRKVPQSPSLVSGSEEPFPAASGGGGGAKE POERSQQQDDIELHETKAVGMSNIXRFLKFDIETGRGSKFTVY KGLVTETTVEVAMCELQDKRLTKSERQPKFEAREMLKGLQHPNI

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			VRPYDSWESTVKGKKCIVLVTEIMTSOTLKTYLKRPRVMKTRVL RSWCQRILKGLQFLHTRTPPIIHRLDKCDNIFITGPTGSGVKIGD LGIALTKRASFAKSVIGTFEFMAPEMYEKYDESVDVYATGMCM LEMATSEYYPSEYQNAQIYKRVTSGVKSPASFDKVAIPEVKIIE EECTNCKNDERTYSKDLLNAFFQSTGVKRLAEEDDGGKIAI KLMRLTIDIKKLGKVKWKEATEISPELERNVPEDVQAEVHVESG YYCSDHKTMAKAKORVSLIKRRRBOQL*
5455	1359	377	ITNVSPATRKSLPKVAMDFITSAFLDPLFLCCLVTFGLERLILQ WVRGKAYLRNAVVTIGATSGLGKECAKVFYAAAGAKLVLCGRNG GALZELIRELTASHATKVTQTHKPLVTLTDLTSGAIVAAAEIIL QCQFGYVDILVMNAGISYRGTIMDTVDVDRKVMETNYFQGVALT KALLPSMIKRRQGHIVAISSIQGKMSIPRISAYASAKHTAQAFP DCLRAEMQYIEVTVISPGYIHTNLSVNAITADGSRYGVMDTT TAQGRSPVEVAQDLAAVGGKKKDVILADLLPSLAVLRLTAPG LFFSLMAERARKERKSKNS
5456	2	2332	CGAGLVAGAVLVLYPASRAGERTRVFGSPAPSLPLHSFGAGC TEVMDPQRSPLLEVKGNIELKRLPKAPSOPLSGSSRLKRRFP QMEDGLEPFRKKTROGAGTKTITSHPKVPSLTITVPTQCGQTGA QKSKTQFPCSTATAITLCKQKPVAVFPGQSTGSGVPMNAG KPKRKPMDLKGQCLDNLNELKCRRETTTLDRGQQLCDQLR DAQCQVKGALGTERTTTEQHLAKVQAGAPQGGQLKTRACQVLEL EERLSTOGBVLQKQKQVELQERRRGLMSQLEEKERLQTSRA ALSSQAEVASLRQETVAQAALLTBRESRHGLEMERRLINQL QELKGNIRVFCVRVPLPGEPTTPPGGLLFPSPGPGSPDPPTRL SLRSRDERRGTLGAPAPPTRHDFSDRFVPPSGQDVEFESIA MLVQSALDQYVPCIFAYQGTGSGKTFPMEGSGGSDPQLEGLIPR ALRLHLSVAQELSGQWTSYSPVASVYVYIYNTVENDJATGTRKG QGGBCRIIRAGPGSGEELITVNARYVPSCEKEVDALLHARQNR AVAKTAQNESSRSRSHVFOIQLSGEHSRGLQCOAPLSLVDLAG SESLDPLGLALQPGERERLRETQAINSSSLTGLVIMALSKESH VYVENSKLTYLQMSLQOASXMAFPNIFPLEENYSESNLSLRF ASKVPSVFLPTGTAQSRKIKHTDPLDVCVCVCVCVCVCVCVP NSMYVVRGSRVAGGCGIQWRAPCPRAIK
5457	2	1540	DDFVERRRTRITCLVSPPHVFGCHASVNRGSLDFLKTGPA LLRSASRIAMKVKKILRLDKENTGWSRPSLNSBGAERMAATTGTP TADRGDAATDDPAARFQVQKHSWGLRSIIGSRKYSGLIVNK APHDQFQVKTDESGPHSRHLYLGMYPYQSGRENSLLYSEIPKRV RKEALLLSWKQMLDHFQATPIHGVTYSREERLIRERKRLGVFGI TSYDFHSEGLFLFQASNSLTHCRDGGKNGFVSPQPGCVSPMK PLEIKTCQSGPRMDPKICPADPAFFSPINNSDLVANIETGBER RLTFCHQGLSNVLDPKSAGVATFVIGESFDRFTGYWNCPTASW EGSGLKTLILLYKEVDSESEVIVHVPSPALSERKTDSDYRVPRT GSRNFPATLALAEFQDSGKIVSTQKELQVFPSSLFPKVEYI ARAGWDRCKYAWMLDRPQQHQLVLLFPALFIPSTENBEQA ASLQSCQPCQBCPAVCONRGQRIL
5458	6642	4022	FVPGREFRQREFAPSEMTASGESSEETVARTAVWRAQPSMLAAEV KRLSEHLELATIRKIOAAEYGLAVLEERKHOLKIQERLEVOYEA IRSEMBOLKEAPGOAHTNHKKVAADGSRREHSLIQRSASKQYV VRKVLRLQTRILKQLRNVLINTQSENERLASVQELKINQNVET QRGRLRDDIKRYKREARLLQDYSLEHEENTSLQKQVSVLRQNO VEFGELKIEIKRLEETETLYNSQLEDAIRLKEISERQLEBALST LICTEREQKNSIRKELSHYMSINDSPYTSHLHVSIDLQKLSDDAA EPNNDAAELVNGFEHGLAKLPDKNKSTPKKRGAPPSPGLSV DLSLELNISETQKLKQQLMONERERKAGLIATLQDTQKQELBTRG SLSSQOERKVRITLHLSALRLQASKERQTLADNEKDRDSHEGD DYEVVDINGPEILLACKYHIVAAEAGELERQKLALRSITHEAREAQ NAEERKRYAEAGQALTEKVSLLKESQDRSLARLEKELKVS DVAGETQSLVAGQELGVFSRELANITHHCVKSNITRNVKL DYREGQAGRTSPGRTSPARGRSPILLPKGLAPRAGIA DQSTQSSPSGSSLSPLSDPRRPPNPNYLNIAIIRDQIKHQ AAVDRTTTLRSORTASQELGPAVDKKEALMERITLKLKLSLSTK

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5459	316	1262	REGITTLRTVLKANKQFARVADANLKSRYENSKAMVTETMMKLR NELKALKEDAAFTSSIRAMPATRCDEYITQLDSMQRLAAARDE KTLNLSLRMAIQGLALATQRLELLLELDEQTRRGRAQAAPKTK PATPSVSTWCACASDRACITGLIAVQVFCSEKISYCD RGHRLSGMASSNEDIVQCYVTRRSRRLGTAYRCVQVYFKKASS KPKRLEKTSDEAAAYFRYHKVTELVNINVARLPKSTKGAIAI GIYFNDDSTKTFACESDLEADEWCVLQMECVGTRINDISLGE DLATQVGEREQSERFHVLMPSPLNOCVMECAQITVTEYICLW DVQNPVKLISWPLSALRRYGRITTWFTFEAGMCECTGEGFLIF QTRDEATYQKVHSAALAIAGQERHLQSVKNSMLQMKMSERRA SLSTWVLPSPRAYNQHI TRQHSITQLYRLQDVSSPLKIRHRETF PAYRSEH
5460	45	2097	RPGCRAGSLSTGSRARERVRNVSAPCCQBSRRCDPEVLKGRSP GLGLAEMPSCGACTCGAAAVRLITSSLSAQRGISGGRHMSVL GRIGTFETQILQRAPLRSFTTEPAYFASKDGLSKDGSQDNKRS ASEGSSKSGSSNGSGKQGLRCPKQCDGLCHVETVFSSTRFVK CEKCHFPFVLSADAGKSTIEPESAEAEVLAFAQQPFPFPFK KIYWLKDYVWQSPFAKVLVSVAVTHKXITENTPMTAQGAS VEKOTSILPRELEIRREDEYVPTLLQIAGISPHENALASWQ QQVQIQIPQERKGGVLDSSHDDIKLEKSNILLGPTGSGKTL AQTLAKCLDVPFAICDCTTLTQAGYVGEDISVIAKLLQDANYN VEKAQQGIVFLDEVDKISVPGIHLQRLDVGSGGVQGLLKILEG TIVNVPKNSRKLGRGTQVDDTNILFVASGAFNGLRIISRRK NEKYLGFCTPSNLKGRRAAAADLNRSGESNTQDIEEKDRL LRHVEARDLIEPMIPEVGRPLVVPVLSLDEKTLVQILTEPR NAVIPQYQALFSDMKCELVNTEADKAIARLALERTQARGLRS IMEKLLBPMFVEVNSDIVCVEDKVEGKEKPGYIRATKES SEEEYDSGVEEGWPRQADAANS ITPFPFPKSPGURARKWRKRRKQGAPEAAWMLSPSGPGERLFD SHRLPQDQFILLVLLIAPGICLLVRLPLCHVFLVSCALPD SVLARVPTVMCAVGLVARQEDSGRLHSEVRLISNVTPEH NIVNLLITCSTPLINSPPSVCSNCGFVEMNGRELVESIKRKC ASTRLPPTPLILLFPEEATNGRGLRLFGSWPFQDVQVPLIT QVQRPLVSVTSDASVSELLMSLFVPTVQVNRINPVHRQLG RANNEFALRVQGLVAKELGOTGRLTPADVAEMNRKQRHPLRP QSAQSSFPSPQSPSPDVQLATLAQRVKEVLPVPLVGIQRDLAK TGCVDLTITNLRLGAVAFMPDITKTQSLTPASASKFPSSGPV TPQETALTFAKSWARQESLQRKQALYEVARRRPTERRAQED
5462	663	3333	KIKRQMSANNPPSAQSVLPTAIVLPAASFCSSPTGSLSA RLNSGSPSPSLTNSRGSVHTVSPFLQILGTRSSVTIQAELS SAVKDLVCSIVYQKFPCEGFGMYDKLILFRIDMSSENTLQLOIT SADLHESGLNEVVLASALATVSDPQIRPHLYVHYSKAPTECDY COEMEGLVQRGLCBQGLNHNKRCAPKIPANCSSVQRKELSN VSLVGLNLSVPRPLQPEYVALPSRESHVITQESRIIPSSGPI NMEKVMVCRVKVPHETFAVHSYTRPTICQYCRLLKGLFRQMGQ KDKCFNCKKRCASKVPRDCLGVTNPGSPSSLGCTDITDIPMDIN NDINSDSRGLDDTERPSPPEMKMFFLDPSDIDVERDESAVKTI SPSTSMIPLMKVVQSGIKHTKRKSSNVKGMVHYTSRDLNRK RHYNRDLSKCLTFQNESSGKYKIEPLSEILRISSPRDFTNIS QGSNPHCFEITITDVMVYVGNKSNKSNHPVLAATQVGLDVAQS WKAIRQALMPVTPQASVCTSPGGKDKHLDKLSISVSNQCIOE NVDLSTVYQIFADEVLSGQSGFVYGGKIRKTRGDVAIKVIDKM RPTQKESQLRNBEVAILQNLHHPGIVNLCMFETPERFVPMVEK LHGDMLEMLSSSKSLPERITKFMVQILVALRNLHFRKNIVHC DLKEPVELCASBPFPQKLDQGFARILIGESKSPRSVGTTPAY LAPVELSKSTNRSIDMWSVGVIIYVLSGTFPFSNEDINDQI QNAAPYVPFWHARSGRAIDLLNMLLVQNMKYSVDEKSHIP WLOQVYTWLDRFPETRIGERYTHESDDARWETIATHTNIVVP KHFIMADNPDDMEEDP LLSVITMTSRCSHLPEVLDPCTSSAAVPVKTVRDCCGLNQOPO YVMQVSAKQQLLSTVVRTLATQSPFNDRPCMRICHGSSQEDL
5463	239	1012	

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			FDVSSPNGIILLFRETSMITMYGNRIITLGEVFKDQVYALKLKG ISICFSLKKAALSGSYVNPQVFRLYGDDALDNLQTTIKILLLSI PHSDLDLYP KLASQSYYSILAEVLTDHNMFIASLEPHVIMYILSS ISBSLLTALDTHVTCGCCCLGHIYVTLTKQLSRSTKKRTTFLNQ ESDFPLALMQQHPHICQMLSTVLNLIIFEDCKTQNSNRPLIG LILLNEKYFSDLRNSIVNGOPPPEKQQAHLICFHEHJAEIRNLL TKNRDRFTQNLSAFREVRNDSMKNSITGVNSNDMS
5469	134	2653	DOEFETSLVPWHLFWMLCSQILLFPVSLCLVQVASSGNMKVLQ EPTCVSDYMSISTCEWKNMGPTWCSRELRLYLQVFLLSAHTC VPENNGAGCVCHLLMDVDVSADNYTLDMAGQQLKNGSKFSP EHWKPRAPGNLTIVHTVSDTLLLTWSNPYPFNLYLNHLYTAVN IWSENDPADFRIVNTYLEPSLRLTAALTKSGISYKARVRAWAG CYNTTWSEWSPSTKWNHSYREFDQHILLGVSVS CIVILAVCLL CYVSTIKIKENWDQIPNPARSLVAIIIDQAQSQMSKRSKQ EPAKCFHWKNCITLKLPCFLHNKRDEDPHKAKEP PQSQSK SAMCFVBSISTYLFBSISVVRVCLVFAPEVCESEFEVEEKEG SPCASPSERDDQFQBRDGVARLTSSFLDLGLSENGGFCQDQ NGESCILLPEGGSTSAHNDWDEPAPAPFPMWKEQFHLSEF PPASPTQSPDHLCTCTETLVIAQNPAYDSFMSLSOSCPRELG PDPLLAHRLSEVEPEMPCVQLSEPTTVPQPEPTWQILRRNV LQHGAAAPVSAFSGVQFVHVEGQGTQASAVGLGFPQBAQ YKAFSLILLASSAVSPKCGFGASSGEGEYKFPQDILPGCGQDPA FVPVPLPTGLDREPPSPQSSHLPSSEPHLGLPEGKVRDMP FKPLPQEQATDPLVDSLGSGIVYSALTCHLQHLKQCHQEQDGG QTFVMSPPCCGCCCDRASPTPTPLAPDFSPGVFLBASLCPA SLAPSGISEKSKSSSPHPAPGNAQSSSQTPKIVNFVSUGVTYK RVS
5470	17	1413	TACRIRTSINRGIAAVKSDAVEMLASGLAYSIMKFFTPGNSDF KNVGLVFNSEKEDRTKAVLCMVVAGAIANVHTLLAYSDLGYYI IXLHIVDESVDGSTRFAFIYLAAPFMDAMMTAGILLKHKY SFLVGCASISDVIAQVVPVAILLSHLEPTEFLPIPLSLYNGA LVBCITCLCLOYKMIHDIIDRSGSELOQDATTIRKMLFWPLA LILATORISRIVNLFVSRDLQSSSAATEAVAILTATYVPGWKP YGMWLEIRAVYPAFCKNPNKSLVSTSNVTVAHKKFTFVCHA LSLTLCFVMFMTPNVSEKILLIDIGVDFAPASLCVVPILRIFSF FVPVTVRAHLTGWMLTKKTFLVAPSSVLRIRIIVLASLVLPYL OVHGATLGVGSLLAGFVGSEMDALAACTVYRKQKKKMNESAT EGCDSAMTDMPTREZVTDIVREENT
5471	1868	658	RSSAPFGPQRAAAATAAAAGVMAAAAGGGGGGEPRTTEGV GPGVQGEVEMVKQGFQDVGPRYTLQYIGEGAYGNVSSAYDHVR NTRVAIKKISPFPHOTYCOQTLRIQIILLRFRHENVIGIRDILR KSTLARMKRDVYVQDLMETDYLKLSQQLSNDCHICFFLYQILR GLKYIRSAVHLRDLKPSNLLINTTCLDKICDGFARLADPEHD HFGFLTEVATGWTYAPPEIMLNSKVTYSIDTWSVGLTASMS NRPIFGKHYVLDQNLHLGLIGLSPSQEDLNCTINWKNVYLSL PSKTKVAMAKLFPFSDSKALDLDRLTTPNPNKRITVEEALAP YLEQYIDPTDEPVAESPPTFAMRLDOLPKERLKEIPQSTARFQ PGVLEAP
5472	1469	753	LYVMARYLSDEAVASIDRLCKANKRSPSTPFGTVRIPQGRARVE DPQALMIFGYSILVWRPDPFAYSDSRVGFPVRSRRFQGGIIFHR GSDKMPGRUVTLLEDHSGCTWGVAYQVQGEQVSKALYLVNREA VLGGYDTKVTIFYPQDAPDQLKALAYVATPQNFYGLGPAPESA LATQILACRQFSGHNLSEYLLRVRDVMQGLGCPAQCEHLAIVDA VOTMLPCFCPCFECALALV
5473	3	2119	PMNVKLLIQDLGDIQRVVPVNDQYKIKTFAHLITESPQEGC KMFATMSKIKHQQLTKVKECYSPLAYSESQQLLPIRELEKQMTS FYDSLGKINEITVLSREAGSSALFKQKQHLACQENCKTIT LIEKGSQVQFVLSNVKLKIPQVETLQGLADIVAFSGVSKK TQDWKKVETNSRLMKPFESRARELKVLAQDPLEKQKQDPE LLRRHRTFFSGLQQRVLANAFKACDELTDILPQEQQLQBARV KLHKQWKDLQGEAPHYLLHLKIDVERKNRFLASRECKTELDRST

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			KLMPOE3SEKTIKREHVFFSDKGPHEHLCRRLLQIEHLCVKLEVRDFVDRDTPGTCVILKELRAAIDSTYKLMDEPDKMKDYTSRFS ETSSWISINETQLKGIKGBAIDTAHHGEVIRAVEIRNGVTKRG ETSSWIKSRKLVTVSSGENAQKQDELAKLSSSPKALVTLDS EYVBMLSNFDQCVYKEIVNGLLEHLLSGSKVEQVQKLLDTE NLPEAQQLLHHQCKTKRISAKKKVQCCQACQAGQEGJLDVRG HEEIRKLSTLDGLERSRERQKRIQVTLKHWRTFTTKETVTV YLPQTGSSHERFLSFSSLESLSLBQTKETSKRTESAVQAEN LVKASEIPLGPQNKQLLQQQAKSIKQVKKLEDTLEBYVIDK S
5474	2	780	TFDVEQLQASRRGTAVASWCSPRFVAGGENAFVKSQWMLKQSTI LKRKKNWFDLNSDGLIYDDQTRQNLIEDKVMFMDICNIRIQ QECRDTPDQKSKDCMLQIVCRDQGTSLCAESTDDCLANKFT LQDSRTNTAYGSAVMTDBTSVSPPTVYAAAPAPVORTLS LQQAQYGYGPGYGAAPGTQVVAANGQAQYVQYVYPAQLGQQ PANQVIIRERYRNDSDLAGMLAGATGMLGSLFVNF
5475	2	506	ARGWLESLSLTQCTTPFSSPCLLHSPITPTHTPNNLGTYYR FSGNEDYLQAMTISLAVKIALALLKFDKTEHGNMVTYRL STFBNVTYQDVGVSEEDLRVGRQKQITVTEHRLVQVQK GEVFNRGWHLLEGWLYLELTARDAVCNVKKV
5476	192	1457	SDMSILLDFCISIKTQVESLRPEKQSETSTHCLVDEPTLWSR PSTRASEVLCTNVSHVLEQVEIRGQFNLSVHLNARTPTGTL VTIKTNLENCHNERLKAQKAVILSHPTFRHNTTNTVYPTVG SWLWVISPMMAYGSAQGLRTYFFGENSETLIRNLPGAVERGLN YLHNGCTHRSIKASHILISGGLVTLISGLSHLSLVHGQHRH AVYDFPQFSTVQVWLSPELLQDLHGVNVKSDIYSGITACEL ASQGVFPQDMERTQMLQKLKPPYSPIDISIPQSESRMINSQ SGVDSGIGESVLVSSGHTVNSDRHLTPSSKTFSPAFFSLVOLC LQQDPBKRPSSASSLLSHVFFKQNKESQDSILSLPPAYNKPST I SLFPVLVWTEPEKDFPEKDSYWF
5477	3	1044	RGNRLYSHEDEQLRGLFELFTGKQILLDEVEVATEPAGSKI VQGVFQGLDLEKAEVLSQLDLENNRDELEIASDRLKYLIV PAPGALTMKQVNSKRLDHLQARAREHFNLYLQKCYHAFEB LPTMNSAENNTANSMAVPSLVANASQKQKQKQKKELE HRLSAMKSAVESGQADDERVREYLLHLQRNIDTSLERIES TDQ EKITLREDSRSRASTSNRSRQERPEVFKFILTNNMAQKVFGA GYPSLFTVTVSDVWEHQRYGALPDQGIKAAPEDFRKAACQQB BQEKEDDEQTLHRAKENDDKDTHPRGYGNRQNG
5478		835	KTVKINVPNVKGSSTVFRATATVRSVHFCSDGSPFVASDXT VKVWATHRQKFLFSLSQHINWVRCAPSDGRILVSAODKTVK LWDKSSRECVHSYCHBGQFVTYVDFHPSGTCLAAAGMDNTVKW DVTRHRLQHYQLHSAANVGLSFHPSGNYLITASSDSTLKILDL MEGRLLYTLHGQGPATTVAFSPRTGYFASGSDQVWVWKNF DI DGHGVEVTKVPRPATLASSMGNLTYSILEQRLTLEEKLEKC LENQQLIMQKATP
5479	2	835	KTVKINVPNVKGSSTVFRATATVRSVHFCSDGSPFVASDXT VKVWATHRQKFLFSLSQHINWVRCAPSDGRILVSAODKTVK LWDKSSRECVHSYCHBGQFVTYVDFHPSGTCLAAAGMDNTVKW DVTRHRLQHYQLHSAANVGLSFHPSGNYLITASSDSTLKILDL MEGRLLYTLHGQGPATTVAFSPRTGYFASGSDQVWVWKNF DI DGHGVEVTKVPRPATLASSMGNLTYSILEQRLTLEEKLEKC LENQQLIMQKATP
5480	444	1952	LSLTSRMEABLVKGRITQATTDKRIQERISQKRLKIEEDLEKH QHLKKKALREKWLIDSGSSKEQEMKQKQDQHQIQVLEQEI LRLEKEIQDLKAEQISTKEEAILKKLSERTTEDIRSVKVR ERKERAESIEDIYANIPDLPSYIPSLRKEINEKEEDDSQR KALYAMEIKVEKDLKTGSESTVLSLPLPSDDFKGIGIKVYDQO KSYAVSSNHSAMAYNGTDGLAPVEVEELLRAQSENSKSPTEH SPVYANPFRPTTPQRTSTVPGPNQRIKNTNGLGIGVNSI ENMGNGLSBERGNFNHLSIPFVHVHRAVITQAEKELTPOKR



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			LMTPEESNMVQDKDAPSPKPRLSFRETIFGKSEHQNSSTCOE DEEDVRYNI VHSLPFDINDTSPVTMIFMGYQOQADSESDKKPLT GYDGIHAELVVIDDEEEDGAEKPSYHPTAFHSQVYQPAKP TFLERKSEASPHKSKKS
5481	3	1422	NSPSGVLCCQCVKSKSLCLFLPLALLALLPLMHSPQPPALRV VATSDRNFMNKKQKPVLTQRFKTRKVESEKPEVTFVDTLTV QGLNAGDDLEAVAKFLOSTGSRDLYRVRVADTFDLIVAGSMIA PGGTRIDDGDKTKNTNHCVPFSAEDHETIRNVAQVFNKLIRYK YLEKAFEDMKKLLFLKAFSETEQTKLMLSGILLGNOTLPAT ILTSLFTDSLWKEGIAASFAVKLFKAWMAEKDANSVTSIRKAN LDKRLLELFPVNRQSVDFHAFKYPTDAGLKELSDFLRVQOGLGR KELQKELQERLSQBCPIKEVVLVYKEMKRNLDPEVATIGLLWT CINNAVVENMKKEELVAEQALHKLQYAPLLAVFSQQSQSELIV QKVQCYTDNIHFMAFKQKIVLVLYFGADVLSZAILKWKKEARV AKGKSVFLDQMKKFEVLEQNAEESSESGEN
5482	1492	528	THVVMGRCYAPHQVLSYINGVTTSPKQVSLVYMPSPNLSRL EGLQEKDGGPYSCSVHVQDKQKGRGHSIKTLELVNVPAPP CRLOQVPHVAVNSLQSGSPRGKPAVQYQNDROLPSQCTFAP LDVTRSSLETHLSSAGVYVCAKNEVSTQACTTILEVSTFG GAAYVAGAVVGTGVLGLLAGLVLLYHREGKALSEEDANDKED IAPRTLWPVKSSDTISKNGTSGVTSARALRPHQPPRPAALTP TPSLSSQALPSPLPTTDDGAHPQIPSPFGVSSSGLSHMGAVP VMVPAQSQAGSLV
5483	1	788	PTFFPKCRAGRGNESDYRKLEBMHQFLVSESKDGLQALTRA EMRIKQLETDSEELSYEQMIQKLVLSERENCGVSEQRIL KLQENKQLRKETESLRKIALEQKAKVKISTHEIEFSIKERG FEVQLREMEDSHRNSIVELRHLLAQKAAANWKESTKLLTESA EIRINNLSSELSQKILHTQELLSQLSEANKEVAENKILILHQE KANRLQRKLSQASERAAASQCLSVITVQRRAASLMQLENI
5484	3	1997	INADHEDLPSSDADSEARKDSGSDSGSDSQENAAAGSNAGS ESQDQERDGGQPNKELPDDSDSDGASHHSGSDNHSERSDNK SEABERSDHEDDPSVDQISGSAENVDDEHRRSDGSHHSE ARGSECAHSDDEKWKGRDQSDGDEKIQNSDDEERAGSDDEK LQNSDDKMQNTDDEKRPQSDUKRQQLSEEEKANSDDERPVA SDNDDEKQNSDDEEQQLSDDEEMQNSDDEPQASDEEHRHSD SESDQHKSESARGSDSEDEVLKMKRQAIASDSEALSDTEVPK NSGTMDLFGGADDISSGSDGDKPTPQPDVENDGLPQDQSE PIPETRIEVEIPKNTDLGNDLVFKLENFLSVEPRPDPQYVE DRFEDEEMLDEGRFLKLVKENTIRWKIRDEBENIEKSNAR IVKSDGSMSLHLGNVFDVYKAPLQGDINHLEIRQGTGLQGA VPTKLTLPFRPHSTDSATHRMILSLADRCSTQKIRILPMAGRD PQCRTEMIKKEERIIRASIRRESQQRMRKQHQGLSASYLE PDRDEEESGESISLAAIKNKYKQIRERARITYSSDDEGSE EDKQRLKAKLISDEVRNPLNRSGLSCTQETPALNEELTDQ NCTN
5485	161	1074	KKILSSMMSDSEAKKRPPLFESSQDTSPIHTTVGEMKHYLCC CCAFANVVAITPIQKVLFRQQLVGTTRAILQLRRDGFNLY RGILPPLMKTTTLALMPGLYDLSCLLHKVSEAPFATSGVAA VLAGTTRAITPLERVQTLQDQKHDKFTNTYQAFKALKCHGI GEYTRGLVPLIFRNGLSNVLFGPLRGIKEHLETTATTHAHLVN DFICGGLGAMLOPLFPINNVKTRIQSGIGRFGSPFKVQKI NLERDRKLINLFRGAHLNHYRSLISWGINATYELFKVI
5486	1404	142	TPGSTISWSPAAAGLSVCRCCRJHPASAMDLFGDLPEFSPR PAAGKEAQKGLPLFDLPPASSTDSGSGGLPLFDLPPASGSDS GSLATSISQMKTEGKGAKKRTSEERKNGSEBELVEKKVCKASSV IPGLKGYVAKRGEREEMQDAHVILNDITEBRCPPSLITRVSY PAVFDXSGGIRASKFAQNLHQLRIKFPKQDVIVSEKTVKRCCL LDYFHTDSEFLAKASQKPAWKDSATCTVLAVDNLILYANG DSRALICRYNRSQHAIALSLSKENFTQYSEKRIQAGGNRY DGRVLGVLEVSRSIGDQYKKGVSVPDIRACQLTNDREIFLL

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5487	535	182	ACDGLFKVFTPEEAVHFLSCLDFKICQTRGKSAADARYEAACNRANAKVQGGASADNVTVVVRIGH
5488	1072	259	AVSLGQIGKQITPAFVPLPQPCFSCNCDMSRVTLADLLLAGLTALEANDPANKDDPPYIDMKVLQSLICGGLLAIGAAVAVLSGKCKKSSQKHQSPVEKALPLITPSSATYC
5489	81	893	AMASGEFQRCQEEVAAYVVVSSGNTDLVSLTSLPKGTGETIHGHKFFIGPGKGANQCVQAARLGAMTSMVCKVGKDSFGNVTYENLKQNDISTEFTYQTKDAATGTASIVNNEGQNIIVIVAGANLLNTEDLRAANVI SRAKVMQCLETITPATSLEALTMASSGKVTILFNPAPADLDLPQFTYLSDFVCCNESEAEILTLGLTVGSAADAGEAALVLLKRGQCVIITLGAGGCVVLSQTEPEPKHITPEKVKAVD TTVSFKI
5490	81	893	GRGPVAAFIDQSNIFLTPKIFLQGRNEEFKPNLLLGTEPELKLERDCRSPVEPVAASPDALALACHQGLDSSGAFPNRGVLGVLFPTVEMVIKVFVATSSGSIARKKQOQVVGLEANKIDFKELDLIAGDEDNRMNRNENVPGEKKPKQNGIPLPQCI FNEQYCGDFDSFSAKRENIIVYFLGLAPPDPSKSGSEKAEBSGGETAQEGSGEDVGNLPEAQKNEEGETATETETEEIAMEGAGEAEEETABGESEPEGEDEDS
5491	204	1194	GRGPVAAFIDQSNIFLTPKIFLQGRNEEFKPNLLLGTEPELKLERDCRSPVEPVAASPDALALACHQGLDSSGAFPNRGVLGVLFPTVEMVIKVFVATSSGSIARKKQOQVVGLEANKIDFKELDLIAGDEDNRMNRNENVPGEKKPKQNGIPLPQCI FNEQYCGDFDSFSAKRENIIVYFLGLAPPDPSKSGSEKAEBSGGETAQEGSGEDVGNLPEAQKNEEGETATETETEEIAMEGAGEAEEETABGESEPEGEDEDS
5492	3	1896	GSAPFLSLGPTGAQARDPDMMARPPSPRYTQSEKRRDPTEGRSEQDMASSFLPAGAITGDSGGELSGDSDGEVFPFHSPEIBETSCLAELPEFAAAHLQGLI QVASREQLLYIARYKQVYKVGNCNTPKPSFPDFQRQKMEAKALGDSSESCAMQBYIAVVKELDPGWNFQIPBKXGKEANTPGQGVISLSYHEETIEEDKNIPYCRENNIDHITKAISKVDNVNVDDEGRALLHACDKGHELVTVLQERADINQDNEGQATLHYASACEFLDIVELLQSGADPTLRDQGCILP ERTVGCTIVSLVQPHTTGKA
5493	1	1876	ASKNPLSAVCTTGIMSSLAVERDPMASDLSRSVFGNTPYEATBEEKLQKIDFSEVGSVVSFLVYDRETEGTEKGYGFCYQDQETLSAMRNLNREFFSGRALRVDNAASEKNKEELKSLGPAAPIDSPYVGDFIDPDAPESITRAVASLPPEQMFLMKQMKLCVQNSHQEARNMLIQNPFQIYALLQAVVMRIMDPFIALKILHRKIHVTLPIPGKSGSVSVSGPGPGGPGLCGPNVLLNQCNPPAPQPHLARRPVKDI PPLMQTPIQGGIFAPGP IPAAVPGAGGSLTPGGAMQPGQMGPGVGPFLKRGQVMSDFRAPI PRGVPITGGLPRGLGDAPNDRGOTLLSVTGEVEPRGYLGGPPOQPMHESAGHDTGPPSHMRGFLTRDLRLLEPRFPMIQGLPMDKRGQSDRAMETRAMETEVLSTRMERRRGHETCAMETTCHEKARQDLARGLEWAGVSSRQMTGQIQGPGPINIGAGGPPQGGPVQGI SGMVNPAGAMQGTCTGTGMOAGTQGGMGAGICGVSIQGGGIQGGIQAASQGGSGSPSSFSPGQSVTIPQDQEAALIMOVLLTADQIMLPPRQQRQSI LILKEIOIKSTGAS
5493	1	1876	BAPMNTKAVPEPRKPGRLTQALNSPLTPEHWNICVGTGPTDCLTDPFRVXKPHLSRASNGHVGTPTVYREKDMYDEILKKSLHIVQKSDVDIMRTKLRLEENSRKDRQTEQLDPSRGDTFVRLAERKPDASWVINGLQKORILKLEQCKEKGDTISKLOTDMKNTNEEMRIAMETTYSEVHRQLTILASSETGKPLGEKKTGAKEQKIMGSALLLSRSVQELTEWQSLKREDLRLVLTSPITISKQGVVWSEKPELAKI IVELEKKLSMESSKSHASAPVRSPPFACLASSALLINQPDQRNKHDPHRSIRGAVRDLKEERLITQQLLQRLDLEVKQLLQAKADEKKLEKARKEHMERRESEVILQDEITLTSILQRLQEMKKBEKSDCPEPHKQGLPAPTPSSKCEQDWPDPSSSEGLRSPCSDGRDDAAARVLQAQWVYKHKKKAVLDEARVLLQAFR

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *-Stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
			GHLTRTKLLSKAIGSEPPSVPGDPQSGSPVPRVPSPIAQATGS PVORRAIVIIQSLRAHLARARHSGATKRTTTAASRRRSASAT HGDASSPFLAALPDRSPSGPQAVAPLGGDDVNSDDSDIVIAF SLPTKHFV
5494	71	536	RSKAKIGTFTREVPSTDMKVRSESSSLTERRAPSPATPRLLGT RRVLGVSEGTGCADAMELVLFVCLILAPHVILASAEKKEKMD PFHYDYQTLRIGLGVFAVVLFSVGLILLRRCCKCSFWQKPRAP GDDEAQNENLTANATEPOKAEN
5495	273	2168	DSLLLIQVDTNPFTHLRSLPSAISRLLIQKKNTRNTSSNAG ELRPASLVVLPRLSAPAFERFCQVNTGLPLLGQSEPEKMWLPP QQAISETRMGHFOPFWKYPGACTOSLASLEQYSEQLKDMVAFFL GCSFLEBEALEKAGLPRDPAGHSQAGAYKTTVFCVTHAGFCCP LVVTHRPPIPKDLGLVRACCSLAGEQQQPVHMGDFELLG IKEL SKPAGDMVCPFGGEVFPVWPSPLTSLGAVSSCETLAFASIPG CTVHTDLKAKAPGCLTPERIPEVHHISQDPLYSIASVSASQ KIRELESHIGIDPNKRGHLLCKDELLKASLSHARSVLITTT GFPFHNIHPEEDDPGSAVAIVAFQALEKEVAIVIQDQAMN LRFKIVYDAVEGQVLTQIPILTYQSGSVIAQAQFLCKGQDPQT PRFDHVALERAGRAADGNVYNAKGNIKELDPIDELFLAAKK IPGISSTGVGDGNNELNGKVKKEAVRHIEGDDVACDVADFA VIAGSVNMGYALACALTYLSCVASHYLKRAVGPSPAPGDDA WTQALPSPVKEKMKGLVGHKVESGVSGIVGMEVDGLPFPNTH AEMIKQLVDVTTAQV
5496	3	2408	QDTQHEIYKGNLTPQLNKNTLKFSAAADVMWVYSQFMDYBS MKSQKGRPISPVDSFPLSIWIQFTRYAESQKRPQTCNQVSLMT SQSBSSDLAQLRKKKLLKEYYTSSEPLTNGGQKPSSSDTFFR FSPSSSEADLHLVHVHGHVSMQINHOYVILLLLFLHESLILLSE NLKRDVFAVNTGSPASTISICIGILLSSAEALLHLPVDPQANTLK SPVSESVPPVDILPTENGDFLSSKRRQLSRDIRRSVTVNH MSDRSMGVLSHLPLKDPPLFSASDTNLKGLISMDYLSDKH LKKISEDESSGLVYKSGSGEIGSETSDKDKSPYTDSSVLYRE DSNLSFDSGGMQNTLSLTSLTSKNETTISIPKAEALLPEASL SENLDISKETFPVRLTKSQSSLSGKPKERCPNIALPLCVSYKN MKRSSQMSLDTISLSDMLEQLLES DGS DSHMFLKGNKKNS TNYRGTAESVTAQANLQNYGTSFPAISTNSGAQENHDDLMS VVVFKITGVNGEIDIRGEDTEICLVNNOVTPDQLGNIISLRHLC NRVPVSGDQKAVIHSKSPFELSLRFSPOGAVIHSLLAEKNGFLQ CHIKNFSTEFLTSSLMNIQHPLDETVATVMPMKIQVSNTKINL KXDSPRSSTVSLRPAPVTHIDHLVLRVSDSDGPHI RDSHMINT GNLKENVSKDSVLLTSQKYDLKKQSVTQATQTS PGVPWPVPSQS ANFPFSPDFTRLQWSEENSLKQLAKAMLAHAHLSEKADLL HLHKKTFV
5497	1821	3308	HSKLLKRRSNTDAYLLSNSCAFAPRLPLSDASQITREGSBHV CFIYKSGFPLSLRCQCHVFSPISSCYINFPFPFPFPVCPQLSN GPHSYLSLSESHVGPAGLPHCLPASRLPRVTSVHLDEYAH YTIIGGMPFSSQIPSNKDWAKPGPYQPLVNLQRKRSKREPD PNGGQPTTASGPPAAAEQRRPSMTVSAATRPGDEMEACRELA IALSRGLQDITORSSRSLGCSGYSYCTTPOCS EDTIPSOVS DYDYFSVSGDEADQGEFUKSSTIPRNSDISQYRMFOAKRPA STAGLPTTLGPAMVTPGVATIRRTPTSKPSVRRRTIGAGPIPTIK TPVIVPVTPTVPLPGVLPAPPDGPEERGRHS PESPSVGEAGQC VTSMPSMWSQASVNPPLPGPKPSIPEEHRAIPSEAEQDER EPPSATVSPGOIPESDPADLSRPTDTPQGDMLNAREGVKLKLT TINDRSAPRFS
5498	2434	1492	LTHQSIFPTGKPCRCCKGASIQMSHLSQOKIYSGENPFACKVGG KVFSEKSNLTERRHPTREKPFCEKNEGKAFSPQKQYIVIKHVN TEKFLPECKNEGKSPQKSNLITWQKLIHTGKPEFCKDCQACIT QKSNLILHORTHTEKPFVCKKCGTPTSGKSNLTETHEKHLGK PFKCSRGCTAPGQKYLIGHQNIHTGKPEYCEKNEOKAFSPQTS LIVHVRITHSGDKPYECNVGKAFSSOSSSLTVHVSHTGKPEYCC NEGKAFSPQSTLALHRIHTGKPKPYCEKNEOKAFSPKSHHILH

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			QKHTH
5499	324	926	GRGICRGRHKITTYPPSRKSGRKGQAQSGWVRYIKAFCKGF FVAVPVAVTFLDRVACVARYEGASMQ?SLNPGGSQSSDVLVLAN MKVNFVFEHGDIVLSVSPKNEPQKIKRVIALEGDIVRTIQHK NRYVFPGRHIVGCDHIGSTDSNPQVPSGLLMAHATHILW PERWCKLESVLPPRLVQREEE
5500	1978	1285	KDFWELQNLFFLYLAKSSSFQFQHLKRLQNDPIKHTWQDFP VKHEPVFIRLNPGRGVMDISAPFFRDPAPLOEGKGFNELLW DVEVVEAFLLNDITQGLYLEVLCPHQHRLVLLSGERNVWQKEL PLSFVRVSGETKWEKAYLPSYFFPVNTKFNATHGSKDRS YEALYFVPQHELQOQKQDFHCLLYFKSNFNTLLGEWQKQPS DLMLIEKCDI
5501	2927	2226	CRPPVSARVAFQHGAVGSGGRPRFVAVVDAARFSSRPFSLE NAIMLALISRLLDWFRSLFWKEEMELTVGLQYSKTFVNVIA SQQFSEDMIPTVQFNMRKVTKGNVTKIMDIOGGQPRFMRWERY CRGVNAIVYMDAADREKIEASRNLEHLDELKPLQGLFVVLG NKRDLNALDEKQLEKNNLSAIDQREICCYISCKEKNDIDIT LWGLIQHSKERS
5502	3	824	NSAFVWFVETALLTCVGLAAPPSSREAFGLAGPNNSTANSKL GTFVKQGSQSSKSAAPSPOCALVRLREHLKHXQGYENRQI REIALAKHCTONKRALQALKRKRFKQLQCTDLSLSTEQ REALNSHTNTEVLRLMGFAAKWKSVMHEMDLKLIDDLQDET EQDIAQEIISAFSQRGVQDDFDELMABELRTLEQELNKKM TNIRLPNVPPSSSLPAQNRKPGMSSTARASASSORAEEDDD IKQLAAWAT
5503	216	654	KQVRKRGKRSDESDEHLLGYFKMSFLFKLISKKEVDQATESTA EKVLVLRPGRDEDPVCLQLDDLSKSSDLSKGAALYLDVDQDT AVYIQYFDISYIPSTVFFNFQGMKVDYGGEDPALRSIKAVVRT SPAGTLGEEKPVS
5504	58	3563	QLSFSFQAPVTFDDITVYLLQBEKSVLLSQOQKELCGSNKLAVPL GPTVANPELFRKPGRGPEPWLGSVQQRSLLEHHPGKQMGYMG DNEVQGPRESSQSLPQKKAYLSHLSTGSGHIEGDWAGERSKL LCPSRIQKSWFQ?PWLIMNEQTALFCACREYPSIRKRSKL TEGYGTPFKVETLCHKAKHMCNVALAARDPTTAASTRSR DPGDVLASPEPLTADCPFIYPPGGLGQFDSWAEELSSRAEL EDPGGDGAIPANVLDICISDLRQKEITDTHSSDDINTLYNDAVE SCIQDPSABGLSEEVVVFEEPLVVFSDVAVYFTRRWGMLDKR QKELYRDVMMNMYELLASLGPAAKFDLISKLEERAAPIKDPN GPKWKGKPPGKNNKVAVREADTQASADSALLQPSVPEARASC CSSSICEBGDGPRIKRTYRPSIQRSWFGQFPWLVIDPKETKL PCSACTERNHLHDKSSRLVRGYTGPFVETLKHYEVSKAHRLCV NTVEIKEDTPHALVPEISSDLAMNEHFPNAAYSIAHSPRLN DPEKILQLQSTGTVILGKYRNRCTACQFIKYISETLKREILED VMSPCVSVLLSSDASDAQCVGIYRKFQMEVKSITYTLAP LYSDTADGYETELVSLDELDPFRKGRVVLGIDGSMGSCR GGLVKKQ?EVLQGLPVHCVARHLYAVDAGCSLIDKXKCLR IRTVYFKYSSNKKWELQGAAPLGEITIRKOLINAVWASR RRTLHALLYSWALARIHQVABAGSQIHRAKMKLAKMGEPF VKFCHFLDPLSIYRPLSEVCQKEIVLITEVNAIGRAYVALES LRHQAGPKKEEFNASFQKDGRLHIGCLDEKLEVABORFQADRERTV LTGIRYLRQRFADRRPQPKNMVEYFDTMAWPSGIELASGNDI LNLARYFRCSLTGYSEALKEEWGLKTIAGHLPFSLCKNAL AHCRCFPLLSKLMVAVVCPVISTSCCEGPKAMNIRTDERTKL SNEVLNLMNTAVNGVAVTEYDQPAIQHVLTSRGRRTSHVYT CAQVPARSPASARLKEEMGALYVEEPTOKPPIILPSRAEABVL XDCIMEPPERLLYPTSQEQAPNS
5505	3312	1219	NCSPRSISAAKMSNRNNKPLSNLPLQLONLKRPPAYLEBPLQ QYHVKSNVETPKLQPKRPSKELAEVLVMPAQISHCYFETLSNF PQEVKDLSSCHRTVLDPLRMTCKALILLRNINLNPSSLEL FFELPRCHDKLLKRLTYHTITVDIKNNAKHKNNKVVVLQNF

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			YTMRLDSNATAAGSLDVMIELYRRNIWDAKTVNVITACFSK VTKILVAALTFFGLKDEDEKODSDSESDDGPARDLLVQVATG KSSKNRKKLEKAMVKKKHKKKKKPEVFMFSATHLHDPQDFA BKLLQGLBCCCKRRFVYKMLMHLISRLVGHLEFLNFYFPLQR FLQPHGRVETKILLFAQASHHIVPPEIQSLMTVMNFMVTDK NSGSEVTVGNAIKETARCPPLAVTSELGLQACHTYKHKVNH MSARTLIHLFRITANPQMLQKKFRGKFTASIERVQVGYELDAK DYIPGAELVEBKERNARNDGDNESISLSEEDADGEWIDVGH SSDEEQQISIKKLNSMPMEERKAKAAALISRLVTQEDPQKIRM AQMRKELDAAPGKGQKRYKIEIDGDESPGELLSLRDIFRLHKK PKSDKETRLATAMAGKTRDRKEFVRKIKTNTPSSSTNKKKKKQK NFMNMRYSQVRSKSKRSFREKQLRLDALLKKKKHK
5506	1	1531	FRGDLGQRGGSAPGSGSSAVPAPATHLPESEERREALCPGRS CSGGGGEETPGTTPVWSPLEGGGDEELRPNPYRVTFYRWAVV LAAPFSLGAGGETPEAPPSWETQWTFEPVVAAGVASFVMPGY LLVQYFRKNYLETGRGLCFPLVACVGFNPKASDEVPLAFRT EAAETTPWMAKLLFCATGLQVSYLTWGVIGERVMTRESYGATA TSPOBAPFDQFVLANRVLALIVASLSCVLCOPKPHGAFMYRY SPASLSTVLSGQVETALKRVSFVFTLAKASVPLNMGVLL SRSTYEWELTACLISTGVSMFLSSGPEPSSPFTLSCILL LGVITAFDSPTSNQDQALFAYTMSVQMYGVNFTSLCTV/SGI LSQGALLESTRFMGRHSEFAAHALLISCSACGGLFTYTTIGQF GAAVFTIIMTLRQAFAILLSCLLYGHTVTVVGGLGVAVFAALL LRVYARGRLKQKQKAVPVESPVQKV
5507	3704	1271	PRGTRCRPAGRASREARRPPCPGAPAGSLIEGGPQTAAGKK VAVADVQGPMPHFDQQLQVLLVPTKEDNQCNGSPRACEKAGFK CTVTEAQAVALACFLDKHDIIDHNRPQLDAZLCRSIRSS KLSNTVIVGVVRRVDEELSVMPFISAGPSTRVVENENIMACY NEILLQFGEVRSQKLKACNSVPTALENSDAIETSDRFTQ YANPAFTPMGYSQGLIGLGLGVFPTNEKADLLDINSCTRI GHEVQCIYAKKMGNIQQWKLIFPTJGGGKIRHYVSLIRVC NGRWAEKISCEVQSDPTDINGCTQIKRKRKSLDVTAASRAT EYSSQRHSSMARHSMITIEAPITKYINIINAKQSSPVVPTA LDRVLEILRTTELYSPQAGKDDPHANDLVGLSDGLRLRLSG NEYVLSITKNYQVSSNIITPISLDVPPRIARAMENIEYVDFDI FELEAATHNRPLIYLGLMFAFGICEFPHCSESTLRSNLQIIE ANYHSSNPYNSHSDVLDATAYFLSKRIKETLDPIDEVAAL IAATIDVDHFORNTSFLNAGSELAILEYNDTAVLESHHAALAF QLTTGDDKCNIFENMERNDYRLKQGIIDVLAETMTKHFHVRN KPVNSINKPLATLENGEETDKQENIVMTLARTPENRILIKRMLI KCADVSNPCRLQYCIWAARISEYFVSQTDEEKQGLPVVMVP FDNRTCSIPSGQISIFDYFTITDMPDAMDADFVLPLDMQHLDNF KVMGLDEKRLNIREPPE
5508	1151	691	LSVTSFRESNSFVQCSKGPFLVYVYLSLRLFPASGLGPPFN VLAKVLNDQVNASPLGVVYFLGLCLGQCVSESCQLEKREKW EYKQADCVWPAQFVFNILFVPPQFRVITYINGLTLGNDTYLSYL KYRSPVPLTPPGCVALTQDAD
5509	1238	619	RKSGCCNALSASGPAASAAAATWVRKLPHEDKLLKQVDFLNE VTDHNIHRIKRVIRYRLQRRDEYTRYNQLSRAVELARLRDLPL ERDQFRVRSAAALLDKLYALGLVTPGKSLCFLVTFASSFCRRR LPTVLKLRMAHLQAQAVFVEQGHVRVGPDVVTDPAFLVTRSM EDFTVWDSKSIKRHHLEYNEERDDFPLEA
5510	96	1195	PAGAHLSGSGSEPLVHSGRGRVGVARVGERGLQASGSPGRSKM AEGSRQPPPPDSSREAPATQNFIIIPKKEIHTVDPNGKXKQAY ADYIGFTILNKGVGKKLTFYRVISEATEKXVALLINTLDRWID ETPPVDQPSRPNKAYRTWYAKLDERENLAVTGVITLAAAVP EAVVLYRESVGNSTRIDYGTGHEAFAFLACCLIGVLRVDDQ IAIVVYVRYVLEVRKLLQRTYRMEPAGSGQVGLGDDFQFPPI WGSSQILDIPYLEPRFPVORKAVNKHQYMFLECLIFLTIMBK GPFAHNSQNLNISAAPVPSKVMQSLIRNYKASCEKFFVYQF KFGSLPIHPVTSG

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5511	276	1980	KISRVLNPPNLIITISAVPISQKEVADQFQSDVDSLLEKDN KSRFLIQVQAKRLAEKLRCDTVSEISVGQRTVNFKINRELLTX TVLQGVIEDSKYOLKSELFGQLQKKIVVESSPNVAKKPIVQ HLRTIIONPIANKLALGHQVIRIWIQDWQCTGLLGTQFOL PGVEERKLQSNPLQLHFEVYVQVKNKAAADSKVAKAAGEPQLS LGDVQALSLWQKFRDLSIEETIRVYKRLGVYVDEYSGESFYREK SQSVLKLLESKGLLLKTIGTAVDLGNGDPSSICTVMSRSD SLVATRDIAAAIDRMCKYNFDTMIYVDEQKKHQQVQVQMLKI MGIDWAERCQHVPGVGVQGMKTRGDVTPLEDVNLSEIQLEMLQI MASIKTTKELGNPQRTAERVLGALITQDFKGLLSDYKFSWR VFGSRDGTGVFLQYTHARISLEETPGCGVINDFTACLQEPQS VSLQHLRFDEVLKYSSQDFQFPHVTSYLLLSHLAAVAHKL QIKDSPPEVAGARLHLFKAVRSVLANGKLLGITPPCRM
5512	120	1015	DPSSLITITVTVGVTLVGLVKSHNSRRREITQDPEAKYFLPL TEKEKISHMTREKFPGLSPDHVLGLPGVGYQLLAKINDLNV RAYTPVSSDDRGVFLIIXIPKPHQVQFPEKQATQYEMK IGETIFFRPGPRGLPHGPKNLGRPDQTSSEPKTLADHLNLA OGQUITPMLQIRHITKDPDRMTMSLIQANTQEDILWKELE EIRATHPDQDFLWYTLDRPPIGWKYSSGFTADMIKEHLPPAK STLILVCGPPLLIQTAHPNLEKLGVTQDMIFTY
5513	2	837	ARNRLSDSPRIFFAGAEITFGGSGSCNVLYSSFPFPSPSPS PPTSRGGPGSRDITMSDEESQDRQLKIVLGDASGKTSLTTC FAQETFGQYKQITGLDFLLRTILPGLNVLTLQIDIGQQTIG GKMLDKYIYGAQGVLLVDITNYQSFENLEWYTVKVSSESE TQPLVALVGNKIDLEHMTIKPEKHLRFQENGFSSHVFSAKTG DSVFLCFQKVAASITGLKNKABEQSGRVKADITVNYQEPMS RVMPPRESKCAVQ
5514	1295	449	VHRPSNTHQNPGRNALPOTFFPIGLHNNCTSTLKYICKKQRT CYLQSKTFLTEILELBITIGVMALTMQWQGEPTFQDFLMLTD YKQGHNNQLOHNNHPTMYFFGLGVADILCTISSLPVSLTK MLSNALFVEAFIFXNETHGRMLDIFVHQLVLVFLTEGLVAPL EPLVRNNVLELLRSSLILLQGSWFFQIGFVLVYPSGGPANDIM DHENILFLTICFCAYAVTIVIGMNYAFITWVKSRLKRLCSS EVGLLKNAREQESSEEM
5515	1572	260	FURLVGRHCDPILLSCLTTPPLYEGLSGSGERTAVVIDGEAF TKCGFAGETGPRCIIPSVIKRAGKPKVRVVCYNINTEELYSYL KRFIHLVYRHLVNPRDRVVIISVLCPSHRETLTRVLFXKY FEVDSVLLAPSHMLALLTLGINSAMVLDCCYRSILVLPYBGIP VLNKGALPLGGKALHKELETQLLEQCTVTSVAKEQSLPSVING SVFPGVLEDVAKRCPFSVLDKRGSLKIAKFNIDONNEPSPPPP NVDPYLDGEKILHLOSTRDSVYELLFQGNESQSVATLIDLS IOCFIDTRKQLAENLVITGTSMLPGFLHRLAETRYLVEKPKY KKAIGTKTFRHTPAKANCVAMLGAIPOALODILGSRVSXKS YVNGTGRIPIQWCSLNNPLMPLHMDVGTQTPPLMKAFSTEK
5516	3	735	NSREPPQAGQFSPKSPSTASSPLFFRPLASSFWMAAGQAGS IKAMRWVPOITRRPVTSSEPGMERPEMMLLLTLLALLGQPTWAG KHYVPGGGKYFSTTEDYREITGLRVSGLLVKVSQVKLGDSW DVKLGLGNGTQEVTLQPEYITKVFVAFQAPLRGMVNYTSEKR YVYHKGILDQISSAYPSQBGQVLVYIGGYQLGLGIGSEFWNY PLEETITTEPPNVLITYANSVPVR
5517	246	499	SEIYVANKRTDSSKMTDVEGSGVANFASARAGRRNALPDQSSAA TDGTSDLPLKIALSVKEDAKEKDKETIQDGLKPKQNEEK KADADAVVAMDLMDEFFCIHIGLPLVAVLDPYTHRGESMBA FLTVAGVYSSVTHLSIGSVKGNLWLVVWRLPKSHRIGIP EFKYVANNGHDTVORSLHLLHIDVYISDQKQEPYLLINSTE THIMSKNPDGFAVKKPDCYYSIGRINNYQYLDNRNPDPAFEB NNVSROPETVAVMKLKTETVLSANLEGGALVASYTFDNGVQA TGALYSRSLTPDDVYQYLAHTYASRNPNKKGDCRKNOMFPN GVNNGYSWYPLQGGMDYNYIWAQCFETLLESCCKYPRESEKPL SPWNNNKASLIEYIKQVHLVKGQVYFQKGNPLPNIWVLEQDK
5518	3	1375	

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			HICPYRINKYGEYILLPGSVYINVTYVGHDPHITKVTIPKYS QMFSAIKKDIILPQQQLDSIPVNSNPCMILYRNLPHSAANT KPSGLFVLSLHLPFK
5519	87	477	TKSRLAQVQEVQESBWRLTENKPTVTKESQDSGSAVAAVVG GVVAVGTVLVALSANGFTSVGLAASSIAKXWSTALANGGQVVA AGSLVAILQSVGAAGLSVTSKVIQGFAGTALAGLSPSS
5520	117	943	PTSGRQVKLKTFTVPSALANIKTSCTIYFTPLVLSYTFNLYI SQEGKDEVKPKILANGARNKMYTLLMLLOTIFYVTCLCDQVLK RTKGKDKIKFTAFRDLFTLTAFFPVSTVFIAFWILFLYNRDL IYPKVLDTVIPVNLHAMHTFIPPTLAENVLRPHSPKSKTGL TLLAASAIYISRLILHLYFTGTNYVPVFAKLSLGLAAPPSSLS YVFTASIIYLLGRKLNHWKNSVQLQWRLESGVICPQWPDWS PAHQLVKENTIR
5521	546	91	KILNMKSCSEENSGKPNMFKAEEDRPLSDVPQEAAGNPQFSEE GVSQEAEGNPFGGFMQPGCGKEDTVPVRLHDPEDMIRGVDELER LREEIRRVNKKFVMMENKORHSRSPVPCFDP
5522	1224	637	GSRPLQCSSEKCNVFGIGSLDWVDPFYQGLVGVYITNYSRRF WQGSTDHKGVPSKRGVTVLVEDPACQVGVAVKLVFKESSEVK AYLDPREKGYRTTIFYPKDPTPKPSVLLYICDNLNDLGL PAPLEDIAEQIFNAAGPSGENTETPLFSLANSIRNLVPREADEHL FALEKLVRKRLRGKQNLHCI
5523	3	1280	SKGKKRMSMSASATARRPVPFDKEDVDFPHQLRAIKGSGFG KVICIQKRDTEKNYAMKMYMKQCCI ERDEVNVSFRLRLQIBIE HVFLVNLWYSPQDEEDPMVVDLLGGLRYHLQNVQVFSRDTV RLYTCMALALDYLRGQHIIRHDVKPNLILDERGHAHLDNFNI ATIKDGERATALSGTKPFMAFELFHSFVNGGTGVSFEVDNWSV GVMAYELLGRWPYDIHSSNAVESVLQLESTVSQYQVPTWSEKEM VALLRKLTVNPHPLSSLDQVQAAPALAGLVWDHLSKRVZPG FVPHKRLHCDPTFELEEMILESRLPHKGGKRLAKKSRDNRSD SSSSEMDYLDCLDAIQQDPVIFNRKLGKSSQDLPREPLPAPES RDAEPVDEABESALPWKCPICPSAGSG
5524	85	2318	REEREDHFGESGCGSGAGGCTFSPNLEKCGGLFSSRRFDS NLHVRKVESLSSDGGGVGGGASALTGAGSIASPDYFNWTRPD CASTEPFENGNSNFYPSVGGMPGKLKINIMNMKQSLKYSQG MAPFVRTLTFRPRNERIDRPTFMETETQVLFSVHRFVEGRGA TTFPACPYFYSQCELLNQLDQRFEPENHTHSSPLDTIYYHR ELLCTSLDGLRVLDLITTSCHGLREDEPRKLEQLFPDITSTPRF REAGKRIFFLSSRVHPGETPSFVNGFLDFILRPDDPRAQTLR RLVPFKLIPMLNPDGVVRGHYTSRGNLNRQYKLPDAVLEPA IYGAKAVLLYHHVHSRLNSQSSSHQSPSCLPDPAVSDLEKAN NLQNEAQCGHSADRNABAWKOTEPAEQKLSNVIMFQSGAGLE RSAPDTIPPKESGVATYVDLGHASKRGCTCYKNSFSDSTQVE NMLYPLISLSAHDFDQGFNFSKKNYKRRDRDQSGSGSGSV ALYKASGLIHSYTLBCQVWGRSVNSIPACCHENGRASPPDPA PPSYTVRLPFGVGRMAIALDQACNPHPRIVLSHSSPLTLN RAWNLKHVNSRGLSSTLVNGVNNKRLGLTPPKSHNGLPVCSSE NTLSRARSFTGTSAGGSSSSQNPQMKNSPFPFHGSRPAGL PGLSSSTQKTVHVLSPVRGKPVNPELQHVCGCLGCHWK
5525	105	834	SNITLDFERHLPIMGQISDQTLQVNLNLPKRVKAVHTLVRSQS LTYERFLQVAVELNDVTKVASGQEKHLLFVQPGSDSSAPWKV VVRVCTYKINKSSGIVKASRINENLYQIOLYKITSQAAGVLAQ SSTSEPDSESSSVTSQASLWGRVYKLTDEEECCICNDGRAD LILPCAHSSQCKICIDKSDRHRNCICRLQMTGANSNVVSDAP TEDOMANYILNADAGQPHRP
5526	3	853	RKPCNPVRAAKRTGAARAPRGLEVTMLRVAMRTLSLITRAVT QVWIPGLPGGSAKFPFNQWGLQPSRLLLQAARGVYVRKPAQSR LDDPPSTLLEDYQVNGLEKVDVQVRLKLSLEMAKKEBLKI KQRFMKVAMPDTRGLRLARIILALSKLSTSEBULEKRIKQ AHSYLLMSIDORIKMLNLANTNYDTICWGLGLEYTTPPL YYRRAHRRFPVTKALCIKVPQETOKIKRRRAALKAAAAQKAK

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5527	3225	565	RRNPSAPAKIPKILKDSQ LIRKPIIGQNPILLIRHQPNPTCSFSATMKLCKTKSRPKQSGG KPKYKSIYVQKWKFKIDPNMFADQCDLVCTEELIDYQLVS PAKPNPSLFSKAEKRRQAQVSEDESESEKSSSPKKTKIKKS KNVATEGTSTQKEFEVKDPELEAGQDMVCDPDEAGWTSNVLV QTAPKKKNKKGKGLKLEPSQSTAAKVPKAKTNIPVHDOKADVS AWKDLFVPRPVLRLSFLQFSAPTPIQALTLAATRDKLDLIGA AETGSGKTLAFAIMHVLQWKRMAAPPSPNTEAPPGTRTE AGAETRSFGKASAFSDALPDDTVESEALPSDIAEABAKTGGT VSDQALPGDDADAGEGSSSLIREKVPKQNESEENLKEQTGN LKQELDDKSACTKAYPKRPLIGVLPTRELAQVQKHIDAVAR FTGKITAILVOOMSTQKQORMLNRRPEIVATPQRLWELIKKHK YHLNRLQRLCLVDEADRMVEKGFELSSQLEMLNDSQYNPK RQTLVFSATUTLVHQAPARILHKGHTKIMDKTAKGLDLMQKIGM RQKFKVIDLRNETHATVELTETRIHGETDSKDFLYLYPIAQVPG RSLVPANSISCKRLGLLKVLDLNDPLAKAQKQRLNRLKQ FARLEDCVLATDVAAGLDIPKQVIVHYVQVPTSELYTFSQ RTARATNBSGLNMLIGPDSVINFPKIKYTLKKEDILPFPVQTK YMDVVKERIRLARQIEKSEYRNPAQLNSWIEQAAALEIELE EDMYKQKADQOQERRRQKQMKLKKELRHLLSOPLETSQTK YPTQSGKPPILLVASPSKESALSCLSKQKKKTKPKPKQPEQP QPSTSN
5528	3	895	GPFLSACRMWQACKVKVHDSLATISITIRYLRJATNASKFE YVRDFEANDTCLAHCVVVRDLGNTHRFABKGNPAKPNDSRAL QMTKCAQTVMEILEDDIVIAVQGDSESYFVKRNTNRRKRAK FMTHVASQFASSYVYWRDYFEDOPLLYPGFGDGVVYVPSNQ LKDYSRRQADCHINLNTVFWALIQSGSLTVYQARQLQTL ADKHEILFSEFNINNEBPPMYRGTVLWQKQVEVNTKEIKL PTMBQKIMAVTRTKIKCPSHILPAPCLWL TFRLVSAHLKTRKLTINPEAKKRWOWDSQGMVSKQVRSGL LSWLSVVLMLGGLSKPGAAQPRIMEKKALEVLDLITRTDPE KNPTELELVSESCEVQSEINERYVITRTPTVPHCSLATL IGLCLRVKLQCLPFFKHKLEYISBQTHSTEDINQKINDKERV AAMENPHLRIVEQCVLFPD
5529	48	640	AGIVHAIISYCHKLVGHRLKPNVVPFKEQBLVKLTDGFSNK FQPKKLTISOGSLAYSAPILLADEYDAFADINSGLVLFML VCGQPPQGEANDSETLTMINDCKYTPSHVSECKDLITRMQR DPKRASLEEIDNHPLQGVQSPATKYNILPVSYKLSSEEHEN STIQRMVLDIADRDIAVEALSTNRYNHTATYFLAERTLREK QKEIKQTRASPSMIKAQFQSWPTKIDVPQDLEDDLZATPLSH ATVPQSAPARADSVMGHRSKGLCDSAKGLDPLAAGALSTVP DASLKPTASGRKCLFVDESESEDEDFVDELTQVLRKPS VTNRLTSKESAPVWQITFEGESDEDFDMDENLPPCLSRLENI ASPTQVHKRYHRSKSGGSGSSSSSTSDLESERRLKDKSGF TYSIHRRDSSEGPQPSKGDGGQSKPNASAGVDKASPSENNAG GGSPSSGCGGNPTNTSGTTTRCAGPNSMQLASRAGELVSELK LMSLCLGSQLHGSTKYIIDPQNGLSFSSVKVCKESTWKCISST GNAGQVPAVGQIKFPSDHIMADTITELERIKSNLNKNVILQLPLC EKTISVNIQRNPKKGLLCASSPASCHVI
5531	4541	2606	GSOPRAPRPSDSMERPEPELITQSRVAVRSPLBHQTVLPALE ALEPDLPLPQYNCRQFSSPEDCLSSPEFDHRIKVMVLDAAV TNVDELSLEELYSALGRKHRAVGKLSFSTVGESLLYMLKXC LGPAFTPATRAWSQLYGAVVQMSRGWDGE
5532	3395	1402	SDNRVVGRRKMLIEDETFEGSEBLHSVLQCKSEVFDVLDGBMR RARTRANFVBMIRGVFLNRAAMKAMANDPVFDRMPTNPDSDY KPLVDRBELLVYADWCAGQPSSETVWRKKNBAAGPGMTLK GENFLKEDPSASSELPHYTIQKGLIDGLHGLKGLKGLKGLK VPLNLETRKGVPLMADGGFVSQQRNLQELLSKQLLCCQLMA LSIVRTGGHFICKTDFLTPPSVGLVLYLCCFERVCLPKPITS RVANSERVVCKGLKVGIDDVRYDYLFAVNIKLNLNRTDSDVNL



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			VVPLEVIRGDEHFDYMRNSHSCSLQIKALAKIHAFVQDTTL SSPQQAIRKRCCLRMIGIPDQARVAFSSSPKSPFELIGQTET DIFSYPKPLTITKLEIRKIPVEDIRCWVSGSERKFLIGLGRSQI YTWGQRSDRMKLDLKTETPDTLLSVIEVIELKGGKAKRKI SAIHI\LDVLVLAGTVDRKHFVQRIQLAEKFTVLSKSPSPDN PIRVKVTIRLEMEKI\FKLEMKIKGSGTPKLSTYGRDRHF VPMGLYIVRTVNEPWINGFSKFKKKFVYKIKTKDSTFDLPADS IAPFHICYGRPLFWMGDGRVHDSKPKQDQKLSKEDVLSITQ MIRA
5533	94	769	NKBRAPQPVVARCKLVLVGDVQCGKTAMLVQVLAECYPTTVS TVFENYIACLETSEORVELSLMDTSSSPYDNRVFLCYSDSDAV LLCFDIRSPETVDSALKKWTEI\DYCPSTVFLITGCKTDLRTD LSTLMLESHQKQAPISYBQCAIAKQLGPEIYLEGSAFTSEKSI HSIFRTASMLCNKPSPLPKQKSPVRSLSKRLALPSRSELISPT FKKKAKKCSIM
5534	3	605	LVRGKAAANFVRGAMDGRLQRVHFLEQRNLVTEVLGALEAK TVGSEKYLAAQAVTLISL\RYGSLNLCNLIGFVYPAASIK ATESPSKDDTVMITVYVYALFGLAEFSPDLLSWVYVYVK CAPILLFCMAFPNNGALIMVQRVVRPLERHGAVDRIINNDLSG RALDAAGITRNKVPSTQPOKDK
5535	1029	332	KSFDSEARLCSLVLSIPTQDFTQKSDSNEEDLKIDCLQESOL NLQKLNISERILTEAKQNRMLTVNIMKMKELIKELIKNGNDAK SVSKQYTLKVTLEHDAEQKVELTE\QKQLQLENKLDSDVAM KVQLQKEPRKVDAAKIRVQVLQKQKQDSKILASISQNEKRAN ELEQSDHMKYQKIQKRLQKQZBNKARKQLDAVIRKQDQKIKVI LSYIPAKYNMKC
5536	942	282	AAATAASLSRGGCKRLTSPSSDVSEAPPPPSAFLPTGRAQMP SGRLCLLITVGLITPRTGQTLKDTTSSSSACATIMDQVPTFRAP DAVITELQPSPTTWADETPQQTQQLRGCTDPLVTPDET HKSTAAHPTDITTLSEKSPSPDVTQDPTLKPSPDDEDF FYDEITLKRGLLVAALVITGIIILTSKCKRQLSRLCRNCR
5537	3	2391	RARVSPQLRVRSGRPERLRVLEINRTSVLRAGTSEFVAKT PGHFGSMWMLLTFRDVAVEPSLEWNEHLEPAQKILYQDVMLEN YRNLVSLGLVSKPDLITLEQRKEPYNVKESTVAIQDPVFSH YKDKLLTERCTEASQKVTISRHHGSDCLNHLKRNKRECEBG HNGCYDEKTFKYDQPDSSSVESLFHQIILSCSAKSYNFDQYRKV PTHSSLLNQREIDTWGKHIIYDKTSVLFRQVSTLNSYRNVTIG ERNYHNNSEKTLNQSSSPNHHORYPLEKQYCKEFEEVPLQS MEQCEQEQSQYKCNKCVETQVCSLKHIHQOTIHIHRENSYSYNEY KDLQSGSNLRQIINNEKPKYKCEKCGDSLHSLSLHTQGIIP TEKPYWKCKGVNLAACSLYLTKQQLIDTGNLILKCAKCSK PTFSNLLVHQRIHTQEKPKYKCKCKGAFRCSSYLLKHKIHG EKPYKCKEKGKAPNRSCLTQHQTHTEKELVYKRCVSKSVARS SNLIMHQVHTGKPKYKCEKCGVFSRSCLTQHRKIHIGENLY KCKVCAKPTICPSNLI\VHERIHTGKPKYKCEKCGAFYSSHLI RHRIRHTGKPKYKCAKCSKFSDSGLTVHREHTGKPYTCKE CGKAFSYSSDVIQHRRIHTGQPKYKCEKCGKAFNYSRLTTHQR SHTGKPKYKCEKCGKAPNRSYLTTHRRRTGGERPYKCEGCGKA SYRSYLTTHRRSHSGERPKYKCEKCGKAPNRSYLLAHQRGHTR EKL
5538	926	161	HSMMKTPWGSIPVLM\LLLLGLIDISQAQLSCTGPPATPGTIG IPGTGPGDQPGTPTGIGKEKGLPGLAGDHGEFGKDGDFLPGNF KGVGPGKPGKPGKPGAGAPGKPGKSGDYKATQKTAFSATRTI HVPLERQDTIHPHVI\TMBBNDVRSRSGKQKGLYFYFTHA SSRNLGVNIMRGRERAKQVVTFCQYAVNTTQCTGSGWLVLEKQ GENVPLQATDNKSLMGMEGANSIPGGLFPDME
5539	38	1258	HKGPSGAAGACALPRGQALSPRCKRCPQPMNARYDELPHYG IVDGPALASFPETVPAVPGPYGPHRPOPPLPGDSDGLKREK DEIYGHPLPFLALLVFEKCELATCSPRUDGAGAGLGTGPGDGVCS SDSPNEIDIAAFKQVRSERPLFSNPNLEMDLVQIAQVLRPHLL

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			ELERKVDLDCNFCIRYITCLAKGMPIDLVTEPRDGGCRDFSDY PASCPSLPDQNNMWRHEDHDSQSVHLGTPGPSSCGLASQSDNS SQSDGLDTSVASPSGGGEDELDQERRRNRKRGIFPKVATNIM RAMLPQHLSDHPSEEQKQLAQVGLITLQVNNWFINARRRIV QWLDQSNWFGGAAPSPSQGQPIGGYETQPHVAVRPPGSGVMS LNLSEWHYL
5540	148	1440	PPILGAGGVHARSPPHAKRLPLTTAGVGGRAPDLLPTPWRQHGR PGGAAPGACALPGQALSGPSRCRPPQPMARRYDLEPHYPGIYD GPAALASFPETVPAPVPGYVPHRPPQPLPGGLSDGLKRRKDEI YQHPILPPLLAIVFEKCELATCSPRDAGAGLGTTPGGDVCSDDS FNEDNTAFKQVRSERPLFSSNPEDLNMIAQIQVLRPHILLELE KGMKPIDLVIEDRDGGCREDFEDYPASCPSLDQNNIWRHED SGSVHLGTPGPSSCGLASQSDNSDQGVGLDTSVASPSGGGE EDLDQEPNRNKKRGIFPKVATNIMRAMLPQHLSDHPSEEQKQ LAQDTGLTILQVNNWFINARRRIVQPMIDQSNRTGQGAAPSPG QPIGGYTETEPHVAFRAPASVGDEFGTRKEWHYL
5541	148	1440	PPILGAGGVHARSPPHAKRLPLTTAGVGGRAPDLLPTPWRQHGR PGGAAPGACALPGQALSGPSRCRPPQPMARRYDLEPHYPGIYD GPAALASFPETVPAPVPGYVPHRPPQPLPGGLSDGLKRRKDEI YQHPILPPLLAIVFEKCELATCSPRDAGAGLGTTPGGDVCSDDS FNEDNTAFKQVRSERPLFSSNPEDLNMIAQIQVLRPHILLELE KGMKPIDLVIEDRDGGCREDFEDYPASCPSLDQNNIWRHED SGSVHLGTPGPSSCGLASQSDNSDQGVGLDTSVASPSGGGE EDLDQEPNRNKKRGIFPKVATNIMRAMLPQHLSDHPSEEQKQ LAQDTGLTILQVNNWFINARRRIVQPMIDQSNRTGQGAAPSPG QPIGGYTETEPHVAFRAPASVGDEFGTRKEWHYL
5542	148	1440	PPILGAGGVHARSPPHAKRLPLTTAGVGGRAPDLLPTPWRQHGR PGGAAPGACALPGQALSGPSRCRPPQPMARRYDLEPHYPGIYD GPAALASFPETVPAPVPGYVPHRPPQPLPGGLSDGLKRRKDEI YQHPILPPLLAIVFEKCELATCSPRDAGAGLGTTPGGDVCSDDS FNEDNTAFKQVRSERPLFSSNPEDLNMIAQIQVLRPHILLELE KGMKPIDLVIEDRDGGCREDFEDYPASCPSLDQNNIWRHED SGSVHLGTPGPSSCGLASQSDNSDQGVGLDTSVASPSGGGE EDLDQEPNRNKKRGIFPKVATNIMRAMLPQHLSDHPSEEQKQ LAQDTGLTILQVNNWFINARRRIVQPMIDQSNRTGQGAAPSPG QPIGGYTETEPHVAFRAPASVGDEFGTRKEWHYL
5543	2405	665	RNVREQWELTSEAVETALRPFPGRGVSPFPKPDWKGSPAP KRPFSDSGAFMSPERRPGVLEADRRRVPASFRAPVPKPTRVHG SSASRDRVLARTMIVADSECRABLKYLRFPAGGVDGSGGGEQ RESARRGPRGSPAFVIEZVLREGASLEQHGLEALMSGRV DNLAVVGLHSDPTFSPFWLHYLLHTDGPASSWRHYIATMAA ARHQCSVLYGSHMAEVLQDQDEWILLQILARHGLKLSITNK LHARRPMLITKEHICALLAKTGEITWSLEILLQALVLTICHSLS SFVFGCIIIPEDGADSGPAPQAPTPPSQGSPPSPDEPLANSGF ESARDVAMERMQOLESLLRDEGTSQREMSRHEHLESLESL VTPSADILEPSHPDMLCFVSDPTFGYEDFTREGAQAPFTFRAQ EYTWEDHGYSILQRLYPEGGQLDEKQFQAYSITYNTIAMSQV DTSVLRRAIWNYIHCVPGIRYDDYDYGVEVQLLERNKYVXTV ACYPEKTRRMYNLFWHRFRISEKVIUNLLLSARMQALLIYAL RAITRYMT
5544	1895	514	LGGLTGRORILLKMGACRIGAPMERHGRASATSVSAGEQAQD PEGRRQEPLEKRRASSASVAVGASAGTRDRRLGYSGPTSVSR QRVSSILKKRPLPFWGLDIGDTLVKLVYFEPKDDITAEEREEZV ESLASIKKLSVWAVGSGTGRDLVHLKDLITCGRRKNLHFTIR PFDHWDAPIQMDRKHPSLHFTVOCGGYAKFGDFTLIGD LQICKLDSDLCIKGILYDSGVNRSQCYFENADSEKCK LPDLKNPYLLLVNIGSQVSLVAVSYKDYKRYVTGTSLOGGTF FGLCCLITGCTTPEALEMASGDSQTKVDKLVARDIYGYDYERFG LPGNVAVASFGNNMSKEKKEAVSKEDLARATLITTTNIGSIAR MCALNNTNQVVPVGNPLRINTIAMRLAYALDYNSKGQKALF SEHGYPGAAGLLELLIKY

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5545	302	131	GNWNSAGRGGAWFWLGLLLALLVPGQGAATQALLVTCGSVL KILNTIHRVLRHSHDKYGGSGGQSVTVGEASDANSYNIRIRG GSEGGCPKGSFVRCQGAVALRTHVLTQKNLTHHFPSPLSNNQEV SAFSDGEGGDDLDMTWKCSQHTWEDAAVRFPQVGVTVFLSVI GEQVGSPIRQGLHVEIGMFSAWNTWTKAMGATITFKPSVEPSAGH DEIL
5546	1592	146	FVPRGGHSSNGQSGSRHSHQKRAARQAQLRNLLEYAANTHSFVTT RGCTGRNIRQLSLDVRVMEPLTASRLQVKKMSLDCVAAGAP LGVTHTFLILSKTETNVYFKMLRPGGPTLTFQVKYSLVRDVVS SLRRHRMHEQQFAPEFLVLNLSFGPHGMHVKNMATFQNLFPSS NVHKVNLNTIKRCLLDVNPDSQELDFRHSYIKVVPVGA SRGMK KLLQEKFPNMSRLQDISSELLATGAGLSESEAEPPDGHNTLPLQ AVAGRNMRQAQSAVRLTETGPRMTLQLIKVQSGVGEKVMFHS FVSKTEELQAILSAKEXKLRKQARQAQQAQNVQRQEQREARH RKSLBGMKIKARVGGSDSEASGIPSTASLELGEDEDEQEDDDI EYFCQAVGEAPSEDLPFAKQKRLAASFGRRKKKMGDRGRGL CDQFPFKKDKSQAGARQFGASRDGGRGRGRGPKKRA
5547	1592	146	FVPRGGHSSNGQSGSRHSHQKRAARQAQLRNLLEYAANTHSFVTT RGCTGRNIRQLSLDVRVMEPLTASRLQVKKMSLDCVAAGAP LGVTHTFLILSKTETNVYFKMLRPGGPTLTFQVKYSLVRDVVS SLRRHRMHEQQFAPEFLVLNLSFGPHGMHVKNMATFQNLFPSS NVHKVNLNTIKRCLLDVNPDSQELDFRHSYIKVVPVGA SRGMK KLLQEKFPNMSRLQDISSELLATGAGLSESEAEPPDGHNTLPLQ AVAGRNMRQAQSAVRLTETGPRMTLQLIKVQSGVGEKVMFHS FVSKTEELQAILSAKEXKLRKQARQAQQAQNVQRQEQREARH RKSLBGMKIKARVGGSDSEASGIPSTASLELGEDEDEQEDDDI EYFCQAVGEAPSEDLPFAKQKRLAASFGRRKKKMGDRGRGL CDQFPFKKDKSQAGARQFGASRDGGRGRGRGPKKRA
5548	1	2153	DQTOPDETALTFPRHETLCPILLVSSLLIRAKKNGNETTA DENETTTTSGPPDQASGPLLAWLLPLLLLLALLAAAYFET RQRKQAVVSTSDKKQPNGLRQEQQRQRMLLSRSPSGQKKYPI PVEHLEEEIRISADDCQFPRRENSLQSHQITFLANKEN REKNRPYHILPDHRSVLSQLDGTPCSDYINASVIGDYKKNK FIAAQPKQETVNDPWRMVQKQKATVMLTNLKERKEEKCHQY WPDQGCWTYGNIRVVCDDCVLVEYTRKFCIQPLPDGCKAPR LVSLQHPFSPWDPGVFPFTPIGLMKPLKVKVTLNVPVHAGPIVVC SAGVGRGTGTFIVIDAMAMMAEAKVDVFEFVSRIRNRQPMQVQ TDMQYTFIYQALLLEYLVGDTLELVSSLEKHLQTLPHGTTTHFDK IGLEEFKRLTNVIRKNNRTGNLPAHMKARVLIQIIPYDFNR VLSNKRQGVYTDYINASFIDGTRQDPIATQGLAHTVSDFN RMWMEKSHITVMLTEVQRREKDCYQVWFGQVTHGTEITEL KMDTLESAISIRDFLWITNQPOARQEQVRVUQVPHFHGWPEIG IPARQGMIDLIAAVQKQOQOQGNHPIITVCSAGAGRTOTPIAL SNILERVKAGLIDLVQAVKSLRLQPHWQVTELEQFEFCYKVVQ DFIDIPSDYANK
5549	915	256	FEATGQKRIAFMAQTARIDREMAQAKKKTATATDPIERLELO CLARGSAGIKGLGRVERIMDDNNNTLDPKFMKGLNDYAVVME KEEVEELPQRDFDKGNGTIDNFELTLRPPMSRAKVEINQAF RKLDTKGDOVTIEDLREVYNKHHPKYQNGENSEEQVFRKFLD NFDSPYDKGLVTEPEMNYAGVGSASITDVFVIMMRTAKWL RKRKRVLKRLNRKKTLSLVKSLDAPFVPSVYVTSASGGTV SLIAFTTMALLTIMEFSYQDTWAKYEYEVKDKFSSKLRIINDI TVAMKCVVGAIDIAKTMVASADGIVVSPVTFDIPQCKEWQ WLLQILQSLKRELSQVYFKSAKSTSTALQVDEGGSSGN ACRKHGLYVKNYAGNMTITVSKALPFGKSAHLAALVHESYN 7SHRIDHLSPELPAIINFLDQTEKIAIDINQMFOYFTITVVT KIATYKISADTHQFSVTERERIINHAAGSHGVSGFMKYDLSSL MVTVEHEHMFHQFVRLCGIVGGTPTSTGMLHGIGKFIIVEIC CRFKLGSYKPVNSVPFDGHTDNLHLLNNTH WQRHRTMDYKSCPSVSTPSSDEHREKFRFTYVYKLVSVGRSE
5550	2364	1210	
5551	211	1760	

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			WEVFERIAEFKLTINTLKRQPPAMAKLIPAKRIFGDNFTPDFIK QRAGMEFIQNLVPELYELNHPDRAFLQMSDPHQSLSPSEDE DERSSQKLHSTSONINI GPSPNPKAPPTDFTLAVIGKSPQKV LAKKRLDKGFYAVKVLCKKILVLRKEQKHIAERAVLLIKWVKI PFLVGIHYSPTTEKLYFVLDFVNGGELFPHLQERSFSPHAR FYAEIASALGYLHSIKIVYRDLKPENTLLDSVGHVLTDFGLC KEGIAISDTTTTTCGTPEYLAPEVIRKQPYDNTVDWMLGAVLY EMLYGLPPFTYCRDVARMYDNTIMKPLSLRPGVSLTANSILEELL EKDRQNLGAKEDFLEIQNHFFSLSLWADLVQKKIPPPFNPNV AGPDDIRNFDTPATTEFTVPSVCSVSDSYTVNASVLEADDAFVG FSYAPPSDELLFL
5552	2748	930	IGPANGAAMGKKKKHKAERSSYEDYADKPLEKPLKLVLRVGN SSEYELSSGSHDSYYDRSDHEREHREKKKKKKKSEKEKGL DOERKREKREKKKKREKENCITSGEADDFPGHKVVEVPPDR PYRACRTQAPNWSYPIQGLLEHPLQKQKQDPGFFAFVPTDA LAPGYSMTIKHMDPGTMMKKIVANETKSTETKADPLCTNNA MTYNRPDTVYKILAKKILHAGPKMSKQALLGHEDAVESEVP EUVVPQVETAKSEKKPSREVISCMFPEPGNACSLTOSTAEHEP ALVEHADEARDIRNIRFLPGGKMGYLRKNGDGLLYSVNTAE DADEEETHPVDLSSLSKLLPGFTTIGPKDRERNKVTFLSSATT ALSMQNNNSVFGDLKSDMELLISAYGDETGVCALSQEPVKA GSYSKVVVDLQDITGGDHSRTLPQLKQRRNPMKPPDIAKVG DTMGDSSSVLEPMKMSYDPVSDVLSLSSLGKVKELDPDPS HLNLDETTLLQDLEHAQAEKGGSRPSNLSLSNASERQHL GQSRISVSGQDPVTHDPYEFQSPPEPAAAKT
5553	74	1095	LEGREAVLVSRRGQPVREHAKGEFFAVTITLSEWALSQVAGM VFLKCNVQPSGSKTIRIGHQCPQAKKCHLHVCSSGGNAGI AAFAARAKLGIPATIVLPESTELQVQHLQGGREHVLCTQWD EANLRAGELAKRDGWRNVPPTHTPLIKHGLASLVQELKAVLRTP PGALVLAVGGGLLAGVVGAGLEVGHQRPITAMETHGAHCFNA AITAGKLVTLPTISVAKSLGAKTVAARALECMQVCKHSEVVE DTEAVSAVQQLDDEERMLVEPACGAALAAIYSGLLRRLQAEGL PPSLTSVVVIVCGGNINSRELQALKTHLQGV
5554	166	2318	CSRTGGGRSLRPAKNCVLTCKLSQATRGLLCPLALRTIMKVL GRSFFNVFLPVLPAVAQVEHEEVAQVRVILKRRGVAAMQSRQ WVRDSCRKLSGLLRKQNAVLNKLKTAIGAVEKDVGLSDEERLQ VHTPEIPKRLMSSENSVQAVYGLQALQGDQYKDVVMKESSR QRLALREDAIKETFEYHLLAARQKQVALLKMGHQNSLSML DILEVDHKAADRLEETIEHAFDMSKVGKGVFAVLVREBEE ANSKQMTYKREVEDDLGSLMLDSQNHQYILTKPDSSTPACH HFIKDIVTQMLSLPCOWLCTAIGLPMFVGIICQGLLSPGLN SINKSVQVETLGEZGVFTFLVLGVLSPERLKVYKISLQGPC YMTLIMIAFGLNGHLLRIKPTQSVFISTCLSSSTPLVSRFLM GSARKGKEKDIDYSTVLQMLVTQDVQGLFVAMVMTLQAGAS ASSSIVVEVLRLVLIGQILFSLANVLLCLVIKKYLGIFYRK LHMSKQNKRLILGTSAPILMIVTVELLDVMSMELCTPLAGAL VSSQGPVVTREIATSIPIRDFIAIVFFASIGLHVFPPTFVAYEL TVLVLTLVSVVMKMLAALVLSLLPRSSQYIKHIVSAGLAQV SEFSFVLGSKRKRAGVLSRESVTLLLSVTTLSLLAPLVNAPAI TRCVPRRKRSSL
5555	212	1425	LSLEKTEIPAPPRCEASGQGVHEADAASAEVRSVNRRTDR GMAPQNLSTFCLLLLYGLAVLAGDPFKLGVCSIKDKK KAYKRLALQLHEDRNPDDQAGKFCQDGAAYEVLSDSEKAKY DTYGEHGLKDGHQSSHGDIPTSTFCGPGFMPGPTPQCDRNTPR GSDIIVLEVTLEEVYAGNFVEVVRKNPVARQAPGRKKKCKQK MRTTOLGPGRPQNTQVQCDCEPNVKLVNERRTLEVEIPGVDR GMVYPIIGKGEHPVDGSGDLERFRIKVVVKHPIERRGDDLYTNV TISLVEVLGPFEMDITLGHKGVHSRDKITRPGAKLNKKEGEL PNFQNNNIKGLIITFDVDFPKQBLTEAREGCKLLKQGGVOK VYNGIQGY
5556	5935	3346	RTFRMSKNCVPMPEFSEYLLRNFGFTVFLQIKTRNNATVKSR

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			LRELDES YIEKFTDFLR LFPVSVHLRR IESYQFPVVEF LIL LFK YTFPHGTHGYFSCLDIW LFDLYLTSKI KSR LGRDKEAVLNRYE DALVLLTEVLNRIQFRNQAQLSELDDETDODQQTWQRYLR QSLFVAVRWELLTHIASFTLFPVQCKLVLGLQGFYTSGS GKRLNITAEKDCRLHCSLRDLSLLQAVQRLAYTTOOVFAAR FINDALTVERLVKVTLYGSCIKLYNITAVPVLKFDLIDVHAQ SLAALQAYSHWLAQYCEVHRQNIQOFTLISTTMDAITPLIST KVQCKLLLSACHLLVSLATTVRPVLISIPAVQKVFNRITDASA LRIVDKAQLVCRALSNIL L PWPNL PENEQNPVRS INHAGLI SALSRDYRNLPKSAVAPQKMPLODTKLIHQTLVSLVEDIVENI SGRSTKERQICQYGLQESVCSLALPFAPIHQSVTDMLSFPL TLFRGLRVQMGVPFTQIIQITFLMFTREQLAESILHEGSTOCR VVEKFLKILQVVQVEPGQVFPFLPSI IALCMEQVPI IASRPS PDVKAEFLPELLFRTLHNNWRYFFISTVLASVQGRGIASSQMNRP QPSAIMQAFQSGFSLQDILHFLKQNLFYLETINTKQLYHKIKFR TAMLPQFVNLGLVQLVHNSHLLQESIGLITRNASVDFDGFPA ATLEPLTS CDVCAKQSVLGRAPFVRLRGRARARAEWA RKPTCCARAGHIEASGKGLCPSCSLAAAEHWANDVL VTLAGLGRDKMMIFPVGLFRRLRLSLAGACRPTLGSAAKTR KHLPARNHCGJSDSSPOLWPEPDRFNRPRKASKASLDPKYVTD RRLAETLAQIYLGKPSRPPLLLECNPGPGILTOALLEAGAKVV ALESDEKTFIPLHLSLGNLQGLRVHCHDFXLDPRSGGVKIPK AMSSRGLFKNLGEIAPWTADILPKVGMPSRGEKRALWKLAY DLYSCTS IYKPGRIEVMNFIKEKQFKMLDGNPDLYHVL SVI WQLACEIKVLHMEPWSFDIYTRKGPLENPKRRELLDQLQKLY LIQMI PRQNLFTQNLTPMNYNIFPHLLKHCFGRRSATVLDHLSR LTPLOARDILMQIGKQDEKVVNMHPQFKTLFETTERS KDCAY KWLDTLEDR
5557	1712	491	RAGCTHQPVDALGAPAPPRPQCTCCLLQPGQSGRFTTMI TGVPSRLMWPVGVITSLAICLHQRLVALAEQADQSCFVRS LLKLKMWQVFRGARSPLKPLLEQVENVNPDLEVPQCTGD YTVTNLAGGPKPYSPYDSQYHETTLKGMPAGQLTKVGNQWFA LGERLAKNYVEDIPFLSPTPNQCVPIRSTNIFRNLESTCLLLA GLFQCCKEGP I IHTDRADEVLVPMYQSCSLRQRTRGRQTA SLQPGISDCLKKVKDRMGIDSSKVDFTFILLRTVAEQAHNLP CPMLKRFARMIQRADVTSLYLPLKEDRESLQAVGPFILHLES NLKAMDSATAPDKIRKLYLAARDVTFIPLIMTGIFDHWKVP FAVDLTMLYQHLESKWFVQLYHGBQVPRPGCDGLCPDMF LNAMS VYTLSPKXHALCSOTQVNVGNTB
5558	1509	96	PLAATAHFAIMSRVAKYRQVSEDDIDS LLSLSPERMEBLEK ELDVVDGSGVPLGRORNTSKQSGVYNNRSMNFCSEKTKK LMQVEMSVDESQVRYTKTDARNGESNGRASKALGPRKSDLG KEPKAGCKKESDSDAGQCSQSTPEKKIIPQIDGRVRAA VDKKEAGDGRSEDAVATKKEEKQSGRNTGLSDKEKKESE MEVAKKEDDEKVKGRBNTDTREKEGEMCRAGENTDMKKDEK VKRGTONTDTTKDOKVKVKNSEPLEKEKXDSKTKPEKQTPSS PTKPSRGPARKVEEAAPIDEPLELRVKNDRPMTSVNVMSDC ITNEILVRFTAEFNTVVKLFALNTRADREVAFAIAMLKAN KTITSNLNDSNHITGKILAI FRALLQNNLTLELRFHNCRTICG GKTEMEIAKLLKENTFLLKIGYHFLAGRPMTVNTLSRNNDKQ RQKRLQORQAORAEKEDLLEVPKAGAVAKGSPKSPQSPK PSPKNSPKKQGAAPAPPPPPPLAPPLIMENKLSLSPATQRM GDVLPAGEKNRDLIAAIRSNLQLKAKVEVPKLLQ
5559	150	1983	SSVVEPSALSVSMACLSPSQLQKQDGFVLVBGLSAEECVAM QQRIGSIVAMDVPLHCRBTFSTQREQLRAGSFDYFLSGGDK IRFFFRKSGVDEKGNLVPBESINKIGALHARDVPKSTTSS FVQVTLMSLGLQMPVQSMITBQKQVQVQVQVQVQVQVQV EPLRGLGWIAVDATLNGCLMFTPGHSTSGVSRARAPVG SAPGTSFLGSEPARDNLSLVTPVQRGALVLIHGEVVRHSQNL SDRSQAYTFHLMBSAGTWSPENLQPLATELFPQLYT CYFIFQFFSSYPFGLHPHCTAPLNPFLQYPPFVMSGQPPQPPQ
5561	2175	1775	

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			QLLAPTFYSPAGVWVFNPSYPIAPGALTFPPPHLYINTQAPS QYGGVITYNPAQQQVQPKSPSPPTPQPVTCKPPPEPVVSRGS S
5562	342	1385	SSGKNDMAAAGAAGLVRLKAGVLSQALYLNLVLCPILEDKRLH LQSTDYGNFLANEASPLTVSVIDRLKEKVVFRHMRNHAEP LASFLDFTITYSYMIDNVILLITGLHQRSAELVFKCHPLGSE QMEAVNIAQTASLYNALIVDTPLAAFPQDCISEQDLDMNIEI IRNTLKYKLYLESFYKFCITLLOUTTADAMCPILRPFADRRAPIT INSFGTELSKEDRAKLFPHQCRLYPEGLAQLRADDDYEQVKNVA DYYPEKLLFEGAGSNFGDKTLRDRFFEHEVKLNKLAFLNQPHF GVYFAVKLKEQECRNVINIAECIAQCHRAKINDYIPIF
5563	342	1385	SSGKNDMAAAGAAGLVRLKAGVLSQALYLNLVLCPILEDKRLH LQSTDYGNFLANEASPLTVSVIDRLKEKVVFRHMRNHAEP LASFLDFTITYSYMIDNVILLITGLHQRSAELVFKCHPLGSE QMEAVNIAQTASLYNALIVDTPLAAFPQDCISEQDLDMNIEI IRNTLKYKLYLESFYKFCITLLOUTTADAMCPILRPFADRRAPIT INSFGTELSKEDRAKLFPHQCRLYPEGLAQLRADDDYEQVKNVA DYYPEKLLFEGAGSNFGDKTLRDRFFEHEVKLNKLAFLNQPHF GVYFAVKLKEQECRNVINIAECIAQCHRAKINDYIPIF
5564	3	914	RVRERDEAVNTARGHRECGDSGSGNNQVGRNRTGALGLALL LLGLGLGLEAASPLSTP*SAQAAGPSSGSCPTFKFQORTSGLC VPLTWCRDRDLDCDSDGDEEERCEPCTQKGCPPPPPLPCPCT GVSDCSGDTDKLKRNCRLACLAGHLRCTLSEDCIPLTWCRDGR PDCPDSDDELQCGTNEILPEGDATMGPPVTLESVTSLRNATM GPVTLESVPSVGNATSSAGDQSGSPTAYGVIAAAVLSASLV TATLLELSWLAQRERLPLGLVAMKESLLESEKTSPL
5565	993	138	RNNSPMPARAGSISRPQRAPGSVAVMNTANVFFGCFATAGPA LALIVFTLRTBFLRIIFLAGAPFVLVLLISSLVWFMAVVID NNDPPTQRTLLIPAPFVYIQEMFRFAYKILKXASBOLKSIN PQETAPSMRLAYVSGLQFQIMSGVPSFVNTLSDSLOPTVGH QDSQPFPLYSAPMTLVIILHVFVGIIVFDGCEKKMGHLLIVL LTHLLVSAQTFISSYTGILNASAFIILVLTWNAFLAAGSCRS LKILCLQODNFFLLNQSR
5566	2043	1232	SHIQHIGRGAQPVVRSMNHSRAVVLVFGMLIPAYYSKAVKT KNVKEYVRMMYVIVFALYVLTETVADQTAWFPLVYELKIAFV IWLSPYTKGASLYRKFLHFLSSKEREIDYIVQAKERGYET MVNPRQGLNLAATAAVTAAVKQGAITERLSFSMDLTTIQG DEPVQORPYQPLPAKKSKEPAPSEAGYGLPKDGDDEKTBEEA EGPVSDEMLTHGRPRRSQSMKSVKTKRORKEVRYGSLKYVKK RPOVVE
5567	1554	233	EFLESQVSPFLANDELTALQCCIDDIFREHWQQLLEAGANTHA CDSBCWFLHRAATCGHLVLLIAGCNALVDTGHWGHSFLRLQ CDEQTLDCRTAMADRGITQDSIEARAPVPELRWLELRSRLQ AGADLEAPLDHGAHTLHVAANGFSRAAALLHRHRSLSARDQD GWEPLHAAAYWQVPLVELLVANGADLNKSLMDETPLVOCDE EVRAKLLELKHHDALLRQSRQSLRLRRRTSSAGSRGVVRRV SLTQRTDLYRKQHAQEAIVWQPPPTSPEPPEDNDROGTGAELR PPPPREDNPEVVRPHNGRVGSGPVRLHYSKRLDRSVYQLSPLD STTPHTLVHDKAHTLADLKQRAAKLQRPPEGPESPEPTAR GLPGDTVTPQDCFRAGGDPPLLLKLTAPVAPVRRERCCLLM
5568	1731	587	ANDROPASRRGAGTAAWASQPGSCNCLCPVESATFALL SLLVSGPRLFLQQPLAPSGILTKSKALRNNQVRLVITYIPVE NPISLLCGAIIIRFAGNFERTVGTVRHCFTVIFAIIFSAILFL SFBAVBSLSKLEVEDARGFTPVAFMGLVGTVSRMRRLVAG NVVSVLWMLLGLASMLPQTSFVSVVGLKSLGALVGTICTYS IDLSREVAKLQDTPPSPLMARRISVFKYVSSGAERRAQRRL NPFVGSYPTSCPHPLSPSHVPSQTHASGQKLASWDSCTCHM PTLPYQPASGLCYQNHGPNPTSSVTPASAGTSLGIPPTP VNSPGIVYSGLAGTPGAAGSKKSSRVMP
5569	2	835	QTPCPLAWERGSSEDSIVPGQKPTCSFSGNDVFPSSLPLG

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			LKLLLLLLLLPLRQANTGCGYGIPIGMPQLPLPARGDQDGYDGLPGP KGEPGIPAIPGIRGPKQKQSEGLPGHKGKMGPPMPGPGVPG PMGIPGEPGEGRYKQKQSVPTVTRQTHOPPAFNSLIRFNAVL TNPGSDYDTSTGKCTCKVGLYTFYVHASHFANLCLVLLYRSGVK VPTPCGHSTKTMQ/NSGVNLRIGVQGEVFLAVNDYDTMVGIGQ SDSVFSGFLIFD
5570	264	946	RDREDRGGVATSEEPAPRAAPQSRGPGVPSGTGRGRERGQGD MSSPSGKRRMDTVVKLIESCHEVTLLGGLNBFVVKFYQPGQT PYEGGVKVRVDLPDKYFFKSPSIGHMKNKIFPNINDEASGTVCL DVINGTWTALYDLTNIFESFLPQLLAYPNPFDPLNGDAAMLYLH RPEEYKQIKKHYIKYATKEALKQEETGDSSESSMSDPSD EACDMEL
5571	264	946	RDREDRGGVATSEEPAPRAAPQSRGPGVPSGTGRGRERGQGD MSSPSGKRRMDTVVKLIESCHEVTLLGGLNBFVVKFYQPGQT PYEGGVKVRVDLPDKYFFKSPSIGHMKNKIFPNINDEASGTVCL DVINGTWTALYDLTNIFESFLPQLLAYPNPFDPLNGDAAMLYLH RPEEYKQIKKHYIKYATKEALKQEETGDSSESSMSDPSD EACDMEL
5572	2602	2085	RTDYRTGIPGRFRVWNAQDGVKLGTLGSGSSNDGSGSSSEPG DAGAAEGGMAAALALLTGSGMELNVALVALVLLGAYRLNV RWGRGLGAGAGAGSEFATSLWRMKKDFPSLBOLEQYDGSRN RILLAVNGKVPDVTGSKFYGPAGPYGIFAGEDASGLATFCLD KDALREYDLDLSLNAVQMSVREKMOFKKYYDVGRLLKPGGE EPSEYTDDEEDTKDNKQD
5573	2562	219	VPAETPNAEDQGEPAABATATPCQSGRRRAGEAEDGVKDAF SEMGVNPPIAQAVEREDWLLPTDIAQSIPLILGGQDVLMAAET SGSGTGAPSPVPIQIYVETLKKDQKQKSGKHTTLKTGASVLANKQ MNFYDRGSAFAIGSDGLCCQSRREVKNHGRATKOLMEKGHYYE VSCHDGSLCKVMSWTQASLDLDTDPFGFGGGTGKSKSNKQFD NGBSEPTMHTTICCYLDDKGVNFKSNKGLDLATFELPFEMKN QALFPACVLANELKFNFGSEKFFPKCOTVALSKAPDGYVYK SQHSGNAQVQTKVLPNAPKALIVPSRELAEQTINIKQPKKY IDNPKLRELLIGGVAARDQLSVLNGVDIVVGTGRLDLDVST GKMLSQVRLVLD EADGLLSQVSDFINRMHQIPQVTSDGKR LQVIVCSATLHSLFVKKLSKIMHFTPVLDLXGSDVPDTHV VVPFNPKTRMLERLAKSHIRTDVHAKDNTRPGANSPEMNSA IKLLKGBYAVRAIKHKKMDQALIFCRTKIDCNLQYFTQGGG PDKHQHFSCVCLHSDRKCPHERKQNERFKKIDVRFILCTDVA RGIDHGVPIYVINTVLPDEKQNYVHRIGRGRARGLAISLVA TEREKVWVHCSSKRGKCNTRLKEDGGCTINYNMQLLSEIEE HLNCTISQVPEPIKVFDEPFGVTHQKRAAGGSGYNGHVDIL APTVOILLALEKAAQTSFLMLCYLFLYLT
5574	1731	952	NGLVVFQKGLPQDQKGVAFIDASTERSMASLGLQLGVLYLG LGLGLGTIVAMFLPSKMTSSVYGASIVTANGSKLWMECATHS TGITQCDIYSTLGLPADIQAAQNMVTSASLSLACTISVVG RCTVFCQSRNKRNVAVAGGVFPLGLHGLFIPVANNLHGLILRD FYSPLVPDSMKFTEGALYLGITSSLSLGIAGILCFSCSCORN RSNYDYAQCPATRSSRPGQPKPKVSEFNSYSLTGVV
5575	456	766	LLMALPCFPPTAAAVLSTGTGKELLERKMLTAKADSPRTAL LCSAWLLTASFAQQHKGSLQKDPDLSQACVGCLEALDYLIDAR SPDIGENSPLYLNP
5576	249	2146	RSNCAWPFWRKLLRRRIMPLRLAKVGCAPVFLFLHREVSSE ERATEPWLKSLVSRKDHVLDLMEANNLRDMPKIQIRAPEA QQTILFSINQSLCGLPGYTPARKLPFWERPPQDPRAPGADQKAFQ SKWLPLETORKEBKYKHKCNAPASDRILSLRSLQDPTPEV DQKFRCPPLATTSVLIVWKEANSTLRLVPSVPLATPLILK EILLVDASTTEHLLKELBYVQKLVQVTVVQREKGLITARL LGASVAQAVLTLDAHCRCPHGLVPLLIARIEKTVVVSPOI VTIDINTEPFAKPVQGRVHSRGNFMSLTKGNETLPHEKQRR KDETYPKSPITFAGGLPFSISKSYHETIGTYDNQMEIWGGEIVEM

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			SRKWKQCGGKLEIIPCSVVGVHVPRTKSPHTFPFKGTSVIARMQVR LARWMDSYKKIITRRLQAAMQAKSPGDISERLQGRQLHQC HNSKYLHMYTPMPVLDLTPFPGRKIKLIGTNGCLDKVENNRG GKFLIMYSCHGLOQNYFEYTTQDRLRINIAKQLCHVSKGALJ LGSCHFTGKNSQVPPKDEWELAQDQLIRNSSGSTCLTSQDKKFA MAPCNPSDPHOLMLFV
5577	3	1275	RNSUCSCGEISVHCLPWVLFILDKVSESSIPFPLKLLPLPULD YSLGNDLNVSPPELTVHVGDSALMGCVFQSTEDKCKIFKIDWTL SPGEHAKDEYLYYYNLSVPIGRFQNRVHIMODLCHDGSLLL QDVQADQGTYYICIRLKJESQVKKAVLHVLPEEPKELMVHV OGLIQMGCVFQSTEVKHVTKVFETFSGRRAKSEIVERTYHKLRM SVEYSQSGHGFQNRVHVLGDIIRNDGSLMLOGVRESGDNVTCR IHLGNLVFKKTIIVLHVSPEEPFTLVTPAALRPVLGGNQLVTV GVYCNITLGLPVLILVKKTCGNKSSVNTVLAVNTKTKTPIBK EK*CHPFCBCEKATYPTIVAEVIEEPPSESEATNTMGKPV WPSLRSDRNSLSLKSGSGMPKTKQRL
5578	3	783	AVKSMASPGGRAPPELPERNGVTRGVYDQVQQAASDAFYD WFGDPGSTRALLPELRLPEDRIVLQCGNSALSYELPLOGTFNV TSVDYSVVVAAMQARYAHVPOLRWEIMDVRKLPSPASPDVVL EKGTLDALLAGERDPWTVSSEGVHTQVQLSEVSRVLPVGGRFI SMTSAAPHFRTRHYAQAYCWSLRHATYSGSFHFLYLMHKGKK LSVAQLALGAQILSPRPPTSPCLPGLDSDHEDFLSAIQL
5579	3	1540	RNSGLARGASALARHGGGLAGGVNCCACASRCQQVNEGLILTR CRALPALATCSRQLSGYVPGRFHECAPRGRRLLLSRVFQPNL REDRVLSLQDKSDDLTCKSRIMLQVGLIYPASPGCHLLPYTV RAHEKLVVRIDGQKQIAGGKVNMPSLSPALWQATNRNDLMGK ELLRLADRKKEYCLAPTHEATIALIASQKLSYKLPFLVLYQ VTRKFRDSEPPAPULLARGFPMWIDFTDSSPAAQQTSLVC DAYCSLFNKILDFPVKQADVSTIGTGVSEHQLPVGIEDRLA ICPRCSFSAIMETILDSQMCNCPACQSPITKTKGTVEGHTVYLG KYSSIFNAQGTTHVQKPTLAENGCGYLGVTIRLAARIEVLST CVRRPSSLAPYQACLIIPPKSGSEKQAASELIGQLVDHITAEVQ LHGEVLLDDRTHLTIGNRLKDANKFGYFVFIAGKRALEDPAHF EVWCQNTGEVAFITKQGVMDLLTPQTV
5580	1681	450	ADGTRCTPGFVVSAGGYSAPAQGRSSSGMKRAAALPGLTAP WRLLQCCLEAGELGKAPAAANGPSALQSGSPGSAWPCVSS GPSRYVLGMQELFRGHSKTRFELASHAKVSHVMSVMSCTGRRLASG SPDKTASVFLLEKORLVKENVYRGHDSVDQLCKMPSNDPLFVT ASQDKTILWVTRTKCLATFVNTYKGININICWSPDQGTAVNGK DDVTFIDAKTHSKABEQKEVNEISWMDNMFELTNGKGC ITHLSVPELQVQINAHPSNCTICKDFPWKGYKATGADALVLS LMDVDELVCVRCFSRLDWPRTLSPSHDGKMLASSEDHDTIDA EVETGDKLNEVQCESPTFTVAHHRKRLALAFCDXDKGYSRSR EAGTVKLPLGLNDS
5581	54	947	GGGSGPRAPSATLLTDQSVAAVAGSEKDIASASAAAAPFACS CSPDPQSGSTTNFVYSPVQPGAPYGNPKMYATGYPTATPAAPAA YNPSLYPTNSPYAPEQFLHSAATLLNKQAMPONSSCGTEG TEHLPVDGTENTRYQASSAFTAGTTPYKVPPTQNSNTAPPY SPSNHPYQTAMVIRSAVPOQNLVYAGGAYYTGVPYAAQPHVVIH TTVQPNPSIPAIYPAVPAAPRTNGVAMGVAGTMTMSAGTLL TPQGFALGAEFVSMPTTAQGTAPQSYVPPHM
5582	5775	2739	ITIRNVTILPLVITHLGSGAQRGERSPAELMRQRKKADI EKGLOPIQSTPLRQREKRALKLWVLPAGENDLREKXYKQ ALWQVNEGLAVADYAAASDQVALPHELLCKLHVRACVYTHGL KKAUKDSKALGLDSESRILAFERKARALNEGHKRYACSSRC SLALPHDSVTLQSGEIAQKLGRLVRKAYRQRELETFTSLISG TAAGVADQGTNSGLGSDIDITDCTVDPGRGSPALLPSTPIMPLF PHVLDLLAPLDSRSTLPSTDSLDPSGDGVFGPELDTLLESLSL VQGLSGSGVSELPQLIPVFPQGTLLPVPVVGSIYVSSPLPP ASGFLVMDPSKCLAAVLDALDPFGPTLDFLLDLPYSERLDAL



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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A-Alanine, C-Cysteine, D-Aspartic Acid, E-Glutamic Acid, F-Phenylalanine, G-Glycine, H-Histidine, I-Isoleucine, K-Lysine, L-Leucine, M-Methionine, N-Asparagine, P-Proline, Q-Glutamine, R-Arginine, S-Serine, T-Threonine, V-Valine, W-Tryptophan, Y-Tyrosine, X-Unknown, *-Stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
			<p>DSFGSTRGSLDKPDSFNESTNSQDHRFPFSGAQKPAFSPFPCMPN</p> <p>TALLIKWPLAATHEFPKQACCLYKPTGPRAGDYTYREGLEHCKK</p> <p>ROILRLSSSDCTWKRIPAPPTKTSFVGSYLLCKDINKQDC</p> <p>KYQDNCTFAYHGEIDVWTEERKFTLMDLLFDPAQYKRGSLT</p> <p>IAKLKHEHGIFTFLCEFDSPRIISKGTQSPVGSCHLAK</p> <p>HSFYNNKCLVHIVRSTSLKYSKIRQPFHQPFDVCRHVRVQCL</p> <p>REDSCHFAHSFIELKVMWLOQYSGMTHEDIVQSKKYVQMKRAH</p> <p>AGKASSMGAAPRTHGPSTFDLQMKFVCGQCRNGOVVEPDKDL</p> <p>YCSAKARHCWTKERRVLLVMSKAKREWVSRPLPSIRNFPQCYD</p> <p>LCIHAGNRKCOQYVHNCFSFHSPEERDMTFKXENKILDMQCTY</p> <p>DMWLKKNPQKPGEGTPISSRBEQKICMPTDYADIMMGYICWL</p> <p>CGKNSKKGQQHIIQSEKIKKVFPTSDSASGNAFRPMGEFR</p> <p>LCURLQKQKACPGDQKCRCAHQEELNWLDRREVLEKQLAKAR</p> <p>KMDLLCPRDDDPGKYMFLQEGDGLAGATPEAFAAATAATTE</p>
5583	3	1265	<p>SSGCRQGRPGRSDRPPFPRHHRHVKETRYDILGVKPSASPEE</p> <p>IKKAIKALKYHPDKNPDEGEKFLILSQAYEVLSDPKRRDVYD</p> <p>QCGEQALKEGSGSPSPSSPMDIFDMFPGGGGMRARERGKIVV</p> <p>HQLSVTLEDLVNGVTKKALQKNVICCKEKGVGKKGSGVEKCL</p> <p>CKRGHMIHQIQIGQMVQIQITVICCKQQGERINPDRCECS</p> <p>SGAKVIREKKIEVHVKEGMDGQKILFHSGEQDQFELRPGDVI</p> <p>IVLDQKHSVFORGHDLIMKIKQLSEALCGFKTKIKTLDNRI</p> <p>LVITSKAGEVIKHGDLRCVRDEGMPYKAPLEKILIIQPLVIF</p> <p>PEKHWSLEKLQLEALLPPROKVRITDDMDQVELKEFCFNEQN</p> <p>WRQHREAYEEDDQAGVQCGTA</p>
5584	3	1265	<p>SSGCRQGRPGRSDRPPFPRHHRHVKETRYDILGVKPSASPEE</p> <p>IKKAIKALKYHPDKNPDEGEKFLILSQAYEVLSDPKRRDVYD</p> <p>QCGEQALKEGSGSPSPSSPMDIFDMFPGGGGMRARERGKIVV</p> <p>HQLSVTLEDLVNGVTKKALQKNVICCKEKGVGKKGSGVEKCL</p> <p>CKRGHMIHQIQIGQMVQIQITVICCKQQGERINPDRCECS</p> <p>SGAKVIREKKIEVHVKEGMDGQKILFHSGEQDQFELRPGDVI</p> <p>IVLDQKHSVFORGHDLIMKIKQLSEALCGFKTKIKTLDNRI</p> <p>LVITSKAGEVIKHGDLRCVRDEGMPYKAPLEKILIIQPLVIF</p> <p>PEKHWSLEKLQLEALLPPROKVRITDDMDQVELKEFCFNEQN</p> <p>WRQHREAYEEDDQAGVQCGTA</p>
5585	2619	915	<p>LPAGTFESSLHEALDQCMATLDELFTNQFSSEALSILKPTKRESN</p> <p>YHSLTYATILEMOMMTFDPQDILLAGNMKEAKMLCORHRRKS</p> <p>SVTDSFSSLVNRPTLQGFTEERHARVCYAKCLQRAALTFLQD</p> <p>KNMVSPKGGIKVRNSYQTYKELDSLQSSQYCKGENNHPFEGG</p> <p>VKLQVGAPNLTLSMLPTRLIRLLBFVPGSGNDYGLLQLEGAS</p> <p>GHSFRSVLCMILLCYHTFLTFTVLTGTVGNVIERAEKLLKPYLNR</p> <p>YFGALFLFLAGRIEVIKGNIDAAIRFEECCCAQQRNKPQHHM</p> <p>CYEWELMWCTYKQNRMSYFADLLSKENCKGATYTYMKRAAL</p> <p>SMFOKEDKPFQDDEVELFRANVPLKALKAKSLPTKFAKRS</p> <p>KRYFSSNPISLVPALENMYWNGYAVIGKQPKLTDLIELITK</p> <p>AEMLEKGPENYSVDDEBLKGLKGLCKYLGRVQRAENFRS</p> <p>ISANKRKIKYDHYLI PNALLLEALLMEQDRNEAIIKLESASQ</p> <p>NYKNYSMESKTHFRQAATLQAKSSLENSSRHVS SVSL</p>
5586	2619	915	<p>LPAGTFESSLHEALDQCMATLDELFTNQFSSEALSILKPTKRESN</p> <p>YHSLTYATILEMOMMTFDPQDILLAGNMKEAKMLCORHRRKS</p> <p>SVTDSFSSLVNRPTLQGFTEERHARVCYAKCLQRAALTFLQD</p> <p>KNMVSPKGGIKVRNSYQTYKELDSLQSSQYCKGENNHPFEGG</p> <p>VKLQVGAPNLTLSMLPTRLIRLLBFVPGSGNDYGLLQLEGAS</p> <p>GHSFRSVLCMILLCYHTFLTFTVLTGTVGNVIERAEKLLKPYLNR</p> <p>YFGALFLFLAGRIEVIKGNIDAAIRFEECCCAQQRNKPQHHM</p> <p>CYEWELMWCTYKQNRMSYFADLLSKENCKGATYTYMKRAAL</p> <p>SMFOKEDKPFQDDEVELFRANVPLKALKAKSLPTKFAKRS</p> <p>KRYFSSNPISLVPALENMYWNGYAVIGKQPKLTDLIELITK</p> <p>AEMLEKGPENYSVDDEBLKGLKGLCKYLGRVQRAENFRS</p> <p>ISANKRKIKYDHYLI PNALLLEALLMEQDRNEAIIKLESASQ</p> <p>NYKNYSMESKTHFRQAATLQAKSSLENSSRHVS SVSL</p>
5587	1768	148	<p>SSAVPDGAVGRPVAVAVGGPHSCRCRCPCCIMAAIGVHRCCTSA</p>

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5588	3	589	CVAVYKDGKAGVAVANDAGDRTVPAVVAYSNESEIVGLAAKQSRIRNISTVTVKRVQILGRSSSDPQAQYKIAESKCLVIEKQKILRVYIDTGEHTFVNEPEVKARLIPSNKSTAHVGLSDANDVTVTPFPDGEKQKVALGCAARAGFWRLRIHEPSALLAHVIGIQDSPTFSKNILVFKLGGTSLSLSMVMEVNSGITYRLSTNDENKGAHTZTLAQYLASEPQRSFKIDVGRNARVMKLTNSAEVAKHSLTIGSANCFILDSLYEGQGFDCNVSARFELLCSPLFNKCIETAIRGLLDQNGFTAUDINKVVLGGSSRI PKIQQLIKDLFPAVELINSIPDPEVIPIGAAIENGILIGKENLIVSDLMISCSARDILVKGVDPSGASRFTVLPFSOTPLPARQHTLQAPGSSISVCLLEYESDGKNSAKZETKFAQVVLQDLCKENGLRDLILAVLIMKRGDSLRVICTDQETGKCEAISIETAS
5589	1884	553	TPPPPEQAVAAATVAAVALLLAAACAAQQEQDYDFKAVNIRGKLVSLEKYRGSVSLVNVASBEGPTQHYRALQQLQRDIPRHPFNVLAFPCIQGQGFQDSNKEIRSFARITYSVSPKPSKIATVGTGADRAFAFLAQYTSKGEITANFWKYLVAIDGKVVGAQMDPTVSVESV RPOITVALRILLKRELL
5590	72	896	LRQAWHEGGTQCTIKERGAALPGESGDPTRGSLGRASWESQSPRPRSPSPSFLPRPCLGLEARPCSIDERNWSLIGRGPAPASGLNRSSGLMIGDRCRPRSRCSCKVWENPSPAJALGKALCALILLATLGAAGQPLGGESICARAPAKYISITFTGKWSQAFPKQYPLFRPPAQWSSILGAHSSDYSMNRKQYQVNSGLRFAERGEAWALMKREIRAGKALQSVHAFVSPAPVPSGTQTSARLEVQRHSLVSPFVVRIVPSPDWVGVGDSLDCDGRWKRQNALDLYPYDCTDSCPTSSPNFATIPDQTVTRITSSSPSHANSFYPRKALPPIARVTLRLRQSGPRAPFIPAPVLPSSRDNRIVDSASVETPLDCRVSLWSWGLCGHCGRLGTRKSTRYVYRVQFANGSPCPLEEEAEACVPDNCV
5591	68	1494	ICSSGALKLIPAMVANSAPVLCLFASLAILVCRGSGDFDDFNLIDNFKETISVQWMDITTTTINRPTTTPRAPIGAGPAGADLADLDDNDNRDGRKPLAGGGGSDKDIIDVVGGEYKEDKGKDGGRYGSNDPFGSGMVAPEGGTAGVASALAMALGAVSSYISYQQKKFCFSIQQLNADYVKGENLEAVVCREPQVKYSTLHTQSAREPPPPPEPARI
5592	242	924	AGSSRRKAAERLIVSAGCRSLAGRASGVLLFAELLPGEREEMALRVRTNRSKINABNKAJINMOAGKRVPTAPATSKPGLRPTALGIDGNKVSQGLQAKPMKKEAKPSATGKVIDDKLPKPLEKVTMLVPVPSEDPVPEPEPRPEPVKKEKLSPEPILVDTASPSPMETSGCAPAREDLQAFSDVILAVNDVARDGADENLCSBYVDITVAYILRQLEEBQAVRPKYLLGREVIGNMRAILIDNLVQVOMKFRLLQBTNMYTVLIDRPMGNMCPKRMQLQVGVYANFLASKYEEBYPPIEGDFAVTVNTYTKHILQEMKELIARLNMFGGRPLHETLRASGLKGVNDVQHTLAKYLMRLTMDYDWHVFPQSLIAGASCLALKILONGSWTPTLQHYLSYTESSLVPMQHLAKQNAAMVQGLTKHMTYKXKATSKHAKISTLPQLNSALVQDLAKAVAKV
5593	3	1113	YGESKDNQKDLISALVLTITVNCPLTPIMAKSAEYKLAIFGRAGVGKLSALVVRFLTKKFIWEYDPTLESTTRHQATIDDEVSMILDTAGQEDTIOREGHMRNGEGFVLVYDITDRGSFEEVLPKLNILDEIKKPKNVTLITVGNKADLDHSRQVSTEGEGLATBLACAPYCESACTGBNICEIFHYELCREVRRRRNVQKTRRSSTITHVQKAINKMLTKISS
5593	3	1113	HASGQRAANMAERGAGQQQEQEMMEVDRRYSESSESDSEKIKHSSGIVADLSRSLKDEERGEEDPEEHELPVDMETINLDRDAEDVDLNIHYRIGKIEGFEVLKVKYTLCLRQNLKICLENLEELQSLRKLIDLYIMQIKKINLEALTELELIDISPLNLRNIGVDDITRLKELFLVNNKISKIENSNIMQIMLELGSNRIRALNEDITTNLESLFLGSRNKTLYLQNDALTNLYVLSQSNWLTKEIDGHLNLEBLVYSHNGIKVIEGLERNWGLTMDIASNRKIKENSHITELOKPYMNDMLLESWSDDLDELKGSRLSTVYLYENPLQKDPQYRRKV

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5594	3	1113	MGALFSVRQIDATFVRF HASGGRAANMAAARGAQQQQSQRTMEVDRRVSSSESGDESGKKH SSGIIVADLSQSLKDGEGERGEDEPSEHSLFVDMETINLORDAE VVDLHWRIKIKI3PFEVLKVKITLCLRQNLKICENLEELQSLR ELDLYDNGIKKIKENLALTELELDISFILLNIGVDKLTIRK KFLPVNKKISKIKMLNHLQNLKLEASNRIRATENIDTLTLE SLPIGKNNKITKLQNLDAITNLTVLSMQSNLAKIEQLQNLVNR ELYLSHNGIEVIEGLENNKLTMDIASNRKIKETISHLITELQ EFWNNNDLLESWSDLEDKGAARSLETVYLERFIQKDPQYRRKV NLALFSVRQIDATFVRF
5595	3	1475	ARWNGKVVQFANPGGQGTNASERQQLPRAMRFGVRTTASE PIALANSPLLYLFFPLPFWAVSQPTPLTGMFALDLYDEEDK LGIPTPVPGKTLQKDAQNLIGISIGGAQYQCPCLYVQVFDNTP AALDQTVAAQDEITGVNGRSIKGKTCVEAKGIQEVKGVTTHY NKLQADPKQGMSLDIVLKKVKHRLVENISSSGADALGLSRAILC NDGLVKRLEELERTABLYKGMTERTKNLRAFELSQTHRAFGD VFSVIGVREPPAASAPVIFADAHRSIEFGIKLKITKPMIT DANVYLAKEIPFTRITAKKLVQVFEVLSLQKVRKMDDEYSC IALQEPFVRSVTRVYLLRLRCQEARARSQNGKLEEL LDQHVQDIPVFLQRIVSTHSKYNDYCVLEADAVFEITVDLA HTTLAYLGNQEFTHGEEEEEEEDTAAGEPSRDTGCAAGPLDKG GSWCDS
5596	698	219	GAVLAPSSLPAAELAAQESQSLIEDLSNTRPTSTVYKISPTFP NGDKYDGDCTITSSGIYERNIGITHTTPNGIVTGSWKDDKQNG PQRLEHFSGAVYRGQKDNMTHGIGITTFYFNGAKYTNFNENRV KGEYETHIQGTMDVTHFTSCSQ
5597	3	731	ISCHMAADQSSLPASWRVTHVAVFPAGDISGHLIAVILSLSP VFVIVGVFTLIIKRELHITISPLGLALNBNVNLIKNVIEPR PCGGPHTAVGTYKGMPSHSGPMWFFSVSYFLFLYLRMHTNNA RFLDLNHWVLSGLQAVAFVSYSRVYLLYHTMSQVLYGGIAG GLAPLAWFTPTQEVLTPLFRFAWFSSEFPLIRDTSLIPNVNL FEVTVTRAEARRQRKLOTGLQ
5598	326	2440	GIGFIAASTIFCKVASLYITLSPPPPSVSGVYSPANSRSCAL VPLIGSGVPPHPPAPSPCCSGQTMKMLSKLLLAVALGFFEG DAKFGERNEGSGARRRRCNLGNPPKRLKRRDRRMSQLELLSG EMLCGGFYPRLSCLSDSPGLGRLENKIFSVTNTECKKLEE IKCALCSPHSQSLPHSPEREVLERDLVPLLCQDYCKEFPYTCR GHIPIGLQTDADEFCFYARKDGGLCFDPFRKQVRGRASNLYD QMEYDKVEISRKHGNCFCIQEVVSGLRQPVGALHSGDGSQR LFILEKGOVKILTPGEGEIPKRPYLDIHKLVOSGIKGDERGLL SLAFHPNTKKGKILVSYTTHNORMAIGPHEHILRVVEYTVSRK NPHQVDLRTARVLEVARLHRKHLGGQLLFGPDGLYIILGDGM TLLDMHEMLGLSDFTQSVLRGLDVTDMCNVPSIPRSPNPTNS TQCPPEVFAHGLHDFRCVADRHPTDININLTCLSDSNGKRS SARILQIIKKDKYESPSELLEVKPSGPNLVGSPFYRGCSREL YGSVFGDRNGNPLTLQGSFVTKQWOKPLCLGTSGCRGYVFS HILGQDRDELGEVYILSSKSNMTQTHNGKILKIVDPKRLAMPEE CRAIVQAQTLTSSCRSLCKNGYCTTGKCCCSFGWKGDFCPTG
5599	326	2440	GIGFIAASTIFCKVASLYITLSPPPPSVSGVYSPANSRSCAL VPLIGSGVPPHPPAPSPCCSGQTMKMLSKLLLAVALGFFEG DAKFGERNEGSGARRRRCNLGNPPKRLKRRDRRMSQLELLSG EMLCGGFYPRLSCLSDSPGLGRLENKIFSVTNTECKKLEE IKCALCSPHSQSLPHSPEREVLERDLVPLLCQDYCKEFPYTCR GHIPIGLQTDADEFCFYARKDGGLCFDPFRKQVRGRASNLYD QMEYDKVEISRKHGNCFCIQEVVSGLRQPVGALHSGDGSQR LFILEKGOVKILTPGEGEIPKRPYLDIHKLVOSGIKGDERGLL SLAFHPNTKKGKILVSYTTHNORMAIGPHEHILRVVEYTVSRK NPHQVDLRTARVLEVARLHRKHLGGQLLFGPDGLYIILGDGM TLLDMHEMLGLSDFTQSVLRGLDVTDMCNVPSIPRSPNPTNS TQCPPEVFAHGLHDFRCVADRHPTDININLTCLSDSNGKRS

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5600	1977	1244	SARILQITIGKGDYKSEPSLLEPKFPSNGPLVGGFVYRGCSQERL YGSYVFGDRNGNPLTLQSSPVTKQWQKPKLCLGTSGSGCRGYFSG HILGFGDELDGEVYLLSSSKSMTQTHNGKLYKIVDPKPLMPPE CRATVQPAQTLTSECSRCLRNGYCTPTGKCCSPGWEGDFCRTG
5601	1977	1244	SRLVLSGHLMQTRDLVQDPKPASPKFIVTLDGVPSPFGYMSDGE EDKCPKMKPVVQTAASNGKLGRLHLPQQLHLSRQLEDNPGSF SNAEMSELSVAQKPEKLLERCKYWPACNGDECAVHHPISPCKA FPNCFAEKCLFVHPNCKYDAKCTKDCPPTIVSRRIPLVSPKP AVAPADPSSSQLCRYFPACKKMECFYHPKHCRTQCTRPDC TFYHTINVPVRHALKWRIPQTSB
5602	246	766	YHTSCTVNR TAKEALEMTEV FVGCLMVYNNVEVWGRNEVQTK NATRAEMVAIDVLDWCROSGKSPSEVFETHIVTVTEPCIMC AALRLMKIPLVYVQGNRFPKGGSVNIASADPLNTGRPPQC IGTRAFKAIVMRKLTFTYQENPWAPSIVKRGECQQLIMNF
5603		565	FRKNTYSSSRGCGVPIETATPSGSGNNTMGAGDGGAPAR WLGTGLGLGLPLPTLSEVYSGKADLVANGTEILLPCTFSS CPGFEDLHFRWTYNSDAFKILISGVINSESDPYVTLKDDRI TIVGSKTBKNNISIVLRDLFESDTGKTCTCHKVKKENLQZHA TIFLOVDDRMO
5604	1	1506	EDIFPAQLLKLQIHRWVQKPPVDRHSXGSSGAGGVAGREWT DQGVQVAGLGHYMAEGGYFAMSDEELACSPIYPLGDFGGQDFG GGDGFGGDFGGGDFGGGSFGGHCIDYCESPTAHCTVLNKGQVQ RLDGLSETIPIHGRGNFTLELQPSLTVKVVRRLEAKRIGVR DVLNGSAAASHVLHQDSGLGYKLDLIFCADLRGESEFQTVKDV VLDCLDFLPEGVNKEKITPLTKEAYVQMVKVCNDSRMSLI SLNSNSGKNVELKFPVDSLRQGFESVDSFOIKLDSLLFYCSKE NMTTFHTPITLIGESVYGDSPQAFDHLNCNIIATRNPSBIRGGG LKXCNLHVGRFASDEIKTLQRYMCSRFIFDPSDIGBQQRKL ESYLQNHVFOLEDKYEYMTLHGVNVESTVCLMGHRRRTNLN TMLAIRVLADGNVIRNVAIVTCYQAPVADANFSNTYIAQV QPVTQCOQYTSWLPEN
5605	35	1821	SQSCFSPSPSPAPFARCSNPDSTGGGVFVRMSAGBGLG MAAPVRLGRKRPACPACNPLFVRLVTEWRDKATRSHRTRPVFC KALRSRLRYPLRSGKRAKILQFGDGLCRMLERLQRHRTSG GDHAPDPSQENSPAPQGRLEAVQDSSNPVPAQFGAGGSGSYW ARHSGARVILLVLYRHLNPNGRHFLTKELLQRCAQKSPRVAD GSARPWALRSLHLNRLVLRTHQPARYSLTPEGLBLAQKLAES GLSLNVIGIPKBPGEETA VFGASAKIASAGVQCPLELRP GEYRVLLCVDIGSTRGKHGRPELLRLQLRVHTVTRVKLHVGDV VWAQETNPRDPANRGLVDHIVVERKRLDLCSSIIDGRPREQ KFLKRCGLERRVYLVESHGSHVNLSEPSLTLQAVINTQVIDG FFKRTALIKESAAYLALLTQRLQRLQGHQTLRSRPMGTGPNDE SQWMTSPRLCSLLTTFSEFNGALKNKQASVREVFARQLMOVAG VESGKAALVDRYTPASILLAAVACATPKQZETLLSTTKGRL QRNLGPALSRKTLQYLYCSYDPLT
5606	3	1099	GRSCPCPGARKGTMSPKSLRSLRLVPAFVFAANSNMLAK LSSVGSISREKETCKLGLIQRQVQMKRNLNVMSVSRGAQIA IEECQYQFRNRNWNCS TLDSLPVFGKJVITQTRFAPVYVIAISA GVAFAVTRACSSGKLEKCGCDRTVHGVSPGFQWSGCSNIAVG VAFSQSPVDVREKRSJASSSRALMHLNHLAAGRKAILTHNRVEC KCHGVSGSCVKVTCWRNVPPFRQVGHALKEKPDGATEVSPRRVG SSRALVPRNAQFKPHITDEVLVLEPSPDFCEQDMRSGLVTRGR TONKTSKIDGCELLCOGRGPHTAQVQLARCSRCKFHWCTFVRC RQQRRLVEHGTCT

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5607	521	141	PPVCNPAEAMPSIGTVCSLLLLGMLMDLMAAGSSFLSPDEHQRV QQRKESKPPAKLQPRALAGWLRPEDEGQARGAELEVRPNAP FDVGILSGVGVQOHSQALGKFIQDILMBEAEAPADK
5608	2	983	WFQSPILRQADPSPRHITLPMDFVAGAIQGVCGDAVGYFLDTVKV RQTEPKYTGIVHVCVREDTHRRRYWGFYRGLLLPVCTVSLVSSSE VFTVYRHLCAHICRLGFPNQAQKPTKADITLSSCAGSLYRVFLT SPTEVAKVRLQTCQAQORRLSASGPIAVPMPGVPCPBP KYRGPILHCLATVAREBGLGGLYKSSSALVLRDGHSEATYFLSYA VILCEMLS PAGESRPDPVGVLVAGGCAGVLAKAVATPMDVLSKRL QADGGQRRYRGLLHGMVTVIVREGPRVLFKGLVNLCCRAFPVN MUVFVAVBAVLRARGLLT
5609	1628	304	AKGVNVLSPSPFRFGALVSGSGLRGRSGSWRFRMRNHSK KRIRKAKRSARPELKDSLDWTRHNYYESFSLSPAADVNERAD ALQLSVEEFVRYERYPYKPVVLLNAQSGWAQSEKTLERLKRKY RNQKFKOGEDNDGYSVEMXMKYIYEMSTEDSDPLIYFDSSYG EHPKRRKLLLEDYKVPKFETDDLQYAGKREPPYRNFVNGPPRS GTGIIHIDPLOTSAWALVQGHKRCVLPPTSTPRELKVTRDEGG NQDSEAITWENVIYPTQLPTWPPPEKPLILQKPGTEVTFVGG WHVIVMLDITLAIATQNPASSNPPVWVHTVGRPKLSKMYR ILKQEPHBLAVLADSDVLSQSTGLASSSSSSSSSSSSSDSD SBCESSGSGDGTVHRKKRRTCSWVNGSDTTSQDDVSKESSS R
5610	54	1196	LEETPASADNATKYQLFLAGLMLVGSINTLSAKADNPMASG CGGSKESGPHQLPQAVGMFLGEFSCIAAFYLLRCRAAGSDSS VDPQPPNPLLFLPPALCDMTGTSIMYVALNNTSASSFQMLRGA VIIITQLEFSAFLGRRLLVSLQWLGILATIAGLVWVGLADLSKH DSQKLSSEVITDGLLIIMAAIIVAIQVBLEEFVYKHNVHLRA VGTGELGFGVILSLLLVMYNYIPAGSFSGNPRGTLEDALDAFCQ VGQQLIAVALLGNISSIAFFNFAGISVTELSATTRMVLDSLR TVVINALSLALGWAFHALQILQFLILLIGTALYNGLRPLLGR LSRRPLAESSESEQSRLGOTRTPINDAS
5611	2	577	FULFHLGIFGSGTFRGSGACSSSSLAASAKFGAGGSPALAMSG ELSNRPOQKATFLKACQERLAINREFLCDQKYSDEENLPE KLTAPKCYKMFQDNLNBSGIDMLAKRMKLOVPTKHLNKKM ISEVTGVSDDTSVDFVNMILGRBAVLKLVNFBGKANSSP KPVGPPPERDIASLP
5612	1	721	ASRDGYMDATIAPIHIPPMPQYGRNRIPELQWAMLCCKHNS SLLTLENLILNEFSYTATEARRLYLQKRTVPSALLVLQICLERL AEDDCIQGWILDGIPETREQLARITQTLGITPHRVIVLSAPDVL IEKRLGKRIDPQGTGEIYHTTFDWPSSSEIQNRLMVPDISELET AQKLLYEHNRNIVRVIYSYKILKVISADQPCVDVYFQALTVQS NHRNTAPPTPRVILLGPVGS
5613	115	1279	RQVDPALRAEKLPLSLDKDEYKPKFNFORISQWFRSLSD KTSRNLFFPLCLNLSFAPVELLYGINSICLGLISDSFIMFPDST AILAGLAASVISKWRDNDAFSYGVVRAEVLAGFVNLGLIPTAF PTFSSGVERMAAPPDVHHERLLVLSLGFVNLIGIFVFKHGGH GHSRSGHGHHSISFLMGRALDQAGHGVHDCSHSEVKGHGAHSHDI ARKHGHHSISDESPSLKSTGTSRGLIQVTHAILADTLGSGIGVI ASAIWMQNFQMLDADDCISLILAILTVSVIFLRESGILMQR TPPLLENSLPQOCYRVQOGLGVYSLGQGHFWTLCSNVYVGTLLI IVAPDADARNILSQTHNIFQAGVGLQYQIDFAN
5614	3	1268	LLSRNHEACPLQAGLGLTORFKFKIRGEBRATNQCGQGETQNER APWGAQRQLGVMAHLQQLQEPREIPTOREALRGHNSALLRVADY C EDNYVQATDKRKALBEETMAFTQALASVAYQVGNLAGHTLRMLD LQGAALQVVEARVSTLQGMVNMHEKVARREIGTLATVQLRPPG QKVIAPENLPLTPYCRPLNFGCLDDIGHGIDKLSLQSLRTGT LSRKSIKAPATPASATLGRPRIPPEVHLFVVDGRLSASSAS SLASAGSABGVGAGPTPKQAAPPAFPLPSSLDPPPPPAEVEF QRPPTLEELSPFPDEELPLPLDLPPLPPPLDQDELGLPDPDPGP GPDPSWVPSYLRKVTVLYPYTTSQKDNLSFSEGTVCVTRY

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5615	9	1558	SDGCEGVSSSEDTGFFPGNYVEFGC ALGRRRRPGDPREMEAAATPAAGAAANRELDVDFMRPLINEQNF DGTSEDEHEQELIPVQKHVQLDDQEGISFVQIMHLKKNIGTG LLGLPLAKNAGIVLPGISLVPIGILVHCHILVRCSHFCLCR FKKSTLGYSDTVSFAMEVSPWCLQKQAANGRSVDFPLVITQL GFCSVYVFLAENVKQVHEGFLESKVFINSTNSNPERRSDV LRIMLCFLPFIILLVFIRELKNLFVLSPLANVMAVSLVIIQY YVVRWPDPMKLPVAGWKYPLFPSTANFAFESIGVVLPLENQ MKESKRFPQALNIGMIVTILVILATLQVCKFIDIKSGITLM LPQDVMVLYQSVKILYSFGLFTTYSIQPVYPAETIIISGTSKHT KWKQICEFGIRSLVSLTICAGAILPRIDIVISFVGAVSSSTLA LILPLVEILTFSKEHYNIWVLNISTIAPTGVGVLGLTYITV KEITYPTPKVAVGTQSPPLNINSTCISGLK
5616	1	719	DDPVRGQPSAAMGASARLLRAVINDAPSGSGTGVSRITTHFE LKHLSSGDLDRONMLEGTEIGVLAKAFIDQGLKIPDDVMTLAL HELKNLTQYSLNDGFPRTLFOAEALDRAYQDITVINLVNPFV IKORTLRWIPHASGRVYNIENFPKPTGIDLTGEPLQREDD KPTVILKRLKAYEDQTKVLEYQKQGVLETFSGTETNKIMPHY VFLQTKVQPSQKASVTP
5617	176	765	PWRGESSKPKGAGAAAEQVNSASGLAPDCEASATARTVSSVG TCRAAGSPKADYDSTCVPCIRINGRQDPGETLLHCENEDLICP KDIKPAATHYILVWPKIKGIRGWRLLADQVLENVYVKGIIIL ERNNFIDFTNVRMGPIPPPCSIHLHLVLAAPVQLGFLSKLV YRVNYSYFITADHLIKRLT
5618	3	1692	YLVNINLKSENKISKEDLMELQVANKTILNPDILNRPVDES LFLNSGGDSLKSIRLLSRIELVGTSPGLLEIILSSSILEYIN HILQTVVDPDRVTERKSCATKRLSHINQERASGTSLHQAIMT FTCENINAFVVLSSGQSILSNSTRFLTLGHCSAACPSSVS QTNINLKLNSPVLIGSKDPSCVAKVSEEGKPAIGTQKMLH VWRSDTGKCVDAPLVVTPTDKSSTTVYIGSHSRMKAUVPY SGKVRMEQILGDIRIESSACVSKGNFTVGCYGLVYVYKNSG EYVWMTTTEDAVKSSATMDFTGLIYIGSHDQAYALDIYRKC VAKSGOGTVPSSPCNLILPHILFATLGLSLALVNPATGVYIN KHSGOCLPSSPQCCSQVICTGCVQMLCTPIHGEQVQFST GPFPSSPCTSPSGKIPFSGHDCFTYCCNKHGLKQKFTTSRV YATPFAFHNYNGSNEMLLAAASTGKWNILESCSQQLQSVYELP GEVSSPVVLESMLIIGCRNIVYVCLDLGNGOK
5619	2160	1477	DSVFLPSTSNVISTAGPAQPMASVRAALRSLGSPFQARGCPCP AQLSHSHQALANDPDKPSIRSYPHLLQHPQLSLTASSGHLGR RSCQPRPLEBLRAGSSTRPQLTSSCCGMSCHYSFLOHCSVL LWGTGRGQSGSPSSPGCCLHPAQHSQDLPLVHVVDVGNQPPLOG TVGLRPGLLGRFORGALRAGDPQCCPLPATVREDLGVSPWAA ECSPPATP
5620	930	182	PLFPFPLAMELTRSYRDGVNTPSPGRLFOVEYATEATKLOST ALQVTSBVCIAVERKRTISPLMEPSSISKIVEIDALHIGCAMSG LTDADKILDKARVETKWNVTENETMTEVSPQVSNLALQFG EDADPGMEKRPQVALLRGVDEKQPLPMRPSPTFVQCDAR AIGSASGQAGSLQEVVHKSMTLKEAKSSLLKQVHEKLMNA TNIELATVQCGNFMPTKEELREKVIDKI
5621	3	819	VVEFVHYTADANVKNESLSSVQGLGENTYVYKPIISLLKGA ENDILTVLKHCRFLKQOQTSIKSSSLCLOGNYAGHDVSSSLF MIMLGDKERTFOFLQPSRLTAPAFINPRIHSSYLPNDTVES GTHVYFCTSTHYIEMLLKAEPLVPSAFHMSGFAFSQCLQWIT QCFWYLDWNIIRCHYIATCVFLGPDQYQVCIAPFHLQDDIQL HTIQDQLQVFLKEALHGFVRSDFETNBIENQRTVLLRDMR NIRLQST
5622	1122	456	AASTKIAVSRKISHSASEKSGTGTISKRLNMPQIRNPMKAMY PGFTYFQPNWREANDRNEVLCFTVGIIRARVSVWKGTVFEN QVDSRTHCAKRWLWPCDDILSPNTKIQVWTYTSWSPCDCA GEVAFLARHSNVLNITPTARLYYQVQPCYQGLRSLSGGVAV

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			EIMDYEDFKYCWENFVYNDNEPPFKWGLKTNFRLKRRRESLQ
5623	3	954	FLPFFITRAPKISRNGQLFTFTTTPFPAKALPGREGIVACFW KKLILTPSTGTMEQLQVTLFLLPSIGSNNSTGVLEANNLSLV TTTKPSITPTESLQINVTPTTGTTPKQTTNELKMSLMST ATFLPSKDEGLKATTTDVKNDSIISNVTVSVLEPNAVSTLQS SPKPTSTQSSIKTETIPGSLVLPDASPSKTIGTSTPVTTPNT SQSQVIGTGGKNNATSATSRYSIILPVIALIVITLSVFLV VGLVRMCKWADPGTFENGNDQPGQSDKESVKLLTVATTSHESGH SAQGGTKN
5624	159	898	FOVAAAGALPGYHGFAPALVSCRELSLSAGSLQERKKRDEFT SSGRKLYFDTHLVCLLEDNGFATQAEIIVCALVKILANND IVYKDMVTNMQCEITFGQVMSQIANVKKMIILEKSEFSALRAE NEKILKELHLQKQVMDSEVIKVRTDTKLDFNLKSRVKELYSIN EKLLLELRTEIVALHAQQRDALTCDDRKITETVAGLKIMLESJK LONIKYLAGSIPTCTIVAGFYRIWI
5625	1	1180	TIFSSAAQAGAPFACALALSPGGAJAAHAEERREGRATPLAAP AGLSRKKRLELDNDLTERPVQKRRASGQPRPLPCLPLSPSP TADDRATAVATASRLQPVLLSPEBGGRAYQALHCPTGTSTYTCR VYVPQALAVLPEFARLPKHVARPTEVLQGLLYAFPTRTKH QWASIVRSRHHIPEPEAVLPQMAALACHQHGLVRLDLKL CRFPVANDHEKKLLENLEDSVLTGDDSENLKHCAPAYVGPB ILSSRASYSKADAVKSLGVAFPMAGHTFPQDSFVLLFOKI RGAYALPAGLSAPARCLVCLLREPAERITATGILLHPLRLQ DMPLAPTRSHLEAAQVVPDGLDGLDAREBEGDREVVLYG
5626	3123	2011	PPRALGSVMENQVLTPIHYVACQRIHRELYLVELSDVQNPATIST TENVLHFKAQGHGAGDNVVEFHLEFLDLVKPEPVYKLTQROVN ITVQKKVSQWERRLTQKQKRLPLFAPDFDRNLDESDAEMELRAK EERLNKLRLESBGSPTLTNLKGLFMYNLVQPLGFSNLFPVN LTVRFCTLGKESFYDTHTVADMMYFQMLAVVETINAAIGVTT SPVLPSLIQLGRNFIPIIFGTMEEMONKAVFVFPVYVNSATE IFRYSEYMLTCIDMDKVLTWLRYTLNIPLYPLGCLABAVSVIQ SIPFNETGRFSPTLPYPVKIKVRSPFFLIQYILMIFLQLYINP RILYQRRRRYQKKKKH
5627	3123	2011	PPRALGSVMENQVLTPIHYVACQRIHRELYLVELSDVQNPATIST TENVLHFKAQGHGAGDNVVEFHLEFLDLVKPEPVYKLTQROVN ITVQKKVSQWERRLTQKQKRLPLFAPDFDRNLDESDAEMELRAK EERLNKLRLESBGSPTLTNLKGLFMYNLVQPLGFSNLFPVN LTVRFCTLGKESFYDTHTVADMMYFQMLAVVETINAAIGVTT SPVLPSLIQLGRNFIPIIFGTMEEMONKAVFVFPVYVNSATE IFRYSEYMLTCIDMDKVLTWLRYTLNIPLYPLGCLABAVSVIQ SIPFNETGRFSPTLPYPVKIKVRSPFFLIQYILMIFLQLYINP RILYQRRRRYQKKKKH
5628	75	1455	VAGAMASKCLKAGFSSGSLKSPGGASGGTETVSMYSSSPCKLP SLSPVANSFSAAGSVLGRSSYRATSCIPALCLPAGGFATSYSGG QGNFSGILTNKETWGLSANDLKLGLKVKQLRQGNASLSGR IRWKECQVYPCDQYSFPTIELGVYKTCSEKAEARLVAPV DNKLAADDFTKYETVSLRQLVSDINOLARILDDLTCLKSD LEAQVBSLKRRLCLLKNHREVSRLCQGLQGLNVEVDAAPEV DLNKVLEENKCOYETLVENNRRDADNDLQTESELANQVVSSE QLQSCQARIIELRRTVHALETELQAGHMRDALESTLAEAKY SSOLAQMOCMITNVEAQLARIRADISQRNQYQVILDVARELEC HINTYRGLLESEDSKLPNCPADPTSPSKCLDCLPAJACGPSA ARTNCSARPICVPCPGGRF
5629	2287	938	GRTPSSSDNNINFLRERAGLSAAVQVTIGNSAASRSPFAARPPV PAPPALPRGRPGTGBSTLSAPAVLVVA/VVVVVSVANANAMA NYTHVPPSGSEVPKINVTVOQREHRCRGALSLLQHLRPHNDP QEVTLQGLPDDITNLKIGCYGVTNEDVVLVRIYUNKTELLVDR DRBKSRVILQAKCAPQVYCTPNRIGLYTIGQALDPKPVHCN FAIPRLIARQAKIHAIHAKHGIWPKSNLNLKNGKYSPLIPTFG

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			ADEDINRPLSDIFSSQILOEBTWKREILSNLGSPPVLCNDL LCKNI IYNEKQGDVQFIDYEYSGNTLAYDIGNHFNFPAGVSDV DYSLYPDRELQSQMLRAYLEYKAYKFGFGTEVTEKEVEILFIQV NQFALASHFPWGLNALIQAKYSTIEFDPLGYAIVRFNQYFKMKP EYIALKVE
5630	1194	278	GFNAIAQTCAHLLPPGS PNLVFPASPRLEFNSSFGYRTILVALF TLICCPGSDEKVFVHVVRPKKLAVERKSSLELTCCTTCNOPEGV GLTSLDKILLDEQAQKHLYVSNISHDVLQCHFTCSOKOESN NSNVSVYQPPQVILTLQPTIVAVGKSPTEICRVFTEPELDSLT LFLFRGNETHLYETFGKAAPQACATATFNSADRDGHRNFSC LAVLDLMSGGNI FHKHSAPKMLIYEPVSDSQMVIIVTVSVL LSLFVTSVLLCFI FGQHLRQQRMGTYGVRANRRLPQAFRP
5631	1053	250	SRVDDFVRPEPSRAEFSRGRKRFAARUATMVVFKLKGAGGCG AGKGPTPQRAIQRJLDTTEMLSKKOELEKIKQELTAAYKHG TKNRKALQALKRKRKYEQQLAQIDGTSTIEFQREALENANTN TEVLKIMGYAAKAMKAHDNDMDIKVDLENDQADQQLAEIS LISKPVGGEFEDEDELMALAELEQBELEKNLLEISGPEFV LPNVPSIALPSKPAKKKEEDDKKELENGSM
5632	3	952	VVLGNSPRLKLMWSLGAARPAVPSGLARSIVHVRTPRHRGA SVYVARGELVAGQOPILLRPFVGSRRRMGPFGPPFATAPTINGD FTFYSGARNDLSGSIASPPVILKLGSPDIKECATTFMLQKRGV GMLLEVEDDOPEDKPLLEELDILCKDYKRCVCMWISLGF NQVVRNDPDPNGPLAVLVPFSMISLYQGPVSVSWITVIFGS LTFILLARVLGGEVAYGQVLGVIGYSLLPLIVAPVLVVGSPF VVSTLILKPGVFWAAYSAASLLVEGFEFTTKKLLIYPIFLIYIY FLSLYTVG
5633	771	460	QGCSTMSVGRPFYRSSEFMEQLSSHLHQVFVFCCTIVVCLCN CLFENSVSPLYMLCFNFMSIFPYSISITKLNLIVLNGLSYQSL LLLLSLGHRRPWGSSMV
5634	1446	855	PRATRIEIRAAFSFRAGAGASGAFPSGRGRSELSGRRAPAM ARNTLSRFRVVIDEFDENKFDVEQEEAAAAAEPGDPDEVD GLLRQGMRLRAFHAALRNSPVNTQNAVKKRAQGVVLLVITNFK SSETQAVQSLEDRGVOLLMKYIYKGFEPKTENSAAVLQWHEK ALAVQGLSITRYLTARTV
5635	3	943	DREPSATATGTRARVSPNPLDGPVSNVQVLSGKRRKFTL RSLFPHFVTRSGAPRAVLVGSWPAKNVAPKAVLRWSGLAL GVRRAVLQPLQTVMSRYSPEFKPDLIDKYYKRPVPELTBE EKYVRELKQTOLIAAPAGKTSSVFEDPVI SKPTNNMIGQNKV LARSLMIQTLAVKRPQFKYHAASAEQATIERNFTYIFQAL KNCPEMIGLVLILKGRFPYQVPELDPDRRRFLAMKWMITECRD KICHTLMPKELSHKILLRAFHNQGPVIRKCHDLKMAEANRALA HYRWN
5636	2253	1143	LEDTTCQHPFAEKLLYLTHKRLREVERNGIPLRFDVFDHTDQG LTVRAKVTPSBEVVDVSKGFSFSQATCSAAGAVVSKPRBI ASLIRNKFPQSADNIPNLKDLLEQVDQAGKALGVISNFPSSPK YGSEDECSATSGSVGANSTTGGIYVAGASSKNTLDMQSSGFD ALHLRIQIRISTQARLESFETLKHEYGRDYSIMZTLQBERYA CERLBSQNLULTELMNEILNALQELASMEKIAVGSYERARDI QEALACUTRISKLELQOQOQVQVLEGLENATARNLQKLDINI LLAVMALLVFFSTANCVPLANKTRNRTFTSLFNVVFIAPLWK HMDALPSYVERFPSSPR
5637	946	2532	NSFGGARAMKMAAYNGGTSAAAGHHHHHHHLLPHLPFPHLR HHHHPQHLHSDSAAVVHPVOOHTSSAAAAAASAAAAANLPG QOQPYFSPAPQAPGPAAPAAAPQVQAAAACTVKAHHHQHSHHP QOQLDIEFDRPIGYGAFGVVNSVTDPRDGRVALKMKPNVPQNL VSKCRVPRRLKMLCFI KIDNVLSALDILQPPHIDYFEEIYVVTE LMQSDLHKIIVSPQLSSDHVKVFLYQILGLKLYLSHAGILHRD IKPGNLLVNSNCVLKICDGLIARVEELDESRRHTQVVTQYRA PEILMGSRHYSNAIDINSVGCIPAEILLGRILLFOAQSPIQOQLD ITDLIATPSLEAMRTACEGAKAHIRGPHKQPSLPVLYTSSQA



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5638	125	1155	<p>THEAVHLGRMVDFDPYKRISAKDALAHFVLDGRLRYHTCMCK CCFSTSTGRVYTSDFEPVTPNKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGRVPLCINPOSAAPKSFISSTVAQSEMPSPPLVWE DRMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN DRKMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN</p>
5639	125	1155	<p>THEAVHLGRMVDFDPYKRISAKDALAHFVLDGRLRYHTCMCK CCFSTSTGRVYTSDFEPVTPNKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGRVPLCINPOSAAPKSFISSTVAQSEMPSPPLVWE DRMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN</p>
5640	280	1692	<p>QQNKKTMLSHMTMKQRQKQKQKTKIMKSHVGRVDGDMGLKRVK IFRDLMLSELSHNSGRLPLFKGRQSRSDKYTFENFYQYQRAQI NMSIAPQKGVKXGNLEGGQALPENTPDPSPHPNDIAP GYSGLKELPEKENTTAVKYQSGPMSQALNDFELSLALIK LKFPEGKAEPLDYRSFNVRATPFQGFEXASRRVFKVDFELL LIDPRFMSFVNPLSGRRSFNRTPKGIWSENIPVITTEPTDDTT VPESEDL CRHNGDVKLLSHQMDKLFAPHLFTFFGGLHFLDGSIOKLIQA EILSDNDSILVLENNFLPKVSKQIHLIAKKFYISITIVSAS NGBSFVLGMIVTG ITFCRMDFLVFLFYLASVLNGLVLVCVSKRTHSLKGLARGGAQ IFSCIIPECLQAMHGLLHYLFHTRNHTFVILHVLVQGVVTEY TWEVFGYQOELELSLHLYLLPYLLGLVNLFFFTLCGTPNGIT KANELLFLHYEFDEVMPFKNVCRSTCDLRLKPARSKHCVNWC VHRPDHRCWVNRICIGAWNIRYFLIYVLITLITASAAITVAIVSTF LVHVMGDIYQGYTIDDLGHLHMDTVFIQYVLFITFVRIWFM LGFVVLFLQGLLYLFLYLAATVNTTBTWDRDWARCQCLP VAMPSPARQVHRTIHSIGLBSNLQIFLPAPFCHERK PSGVGDVTEGPGSRAARGFRVWRKRGVGAQYAKKHLABAK YKERGTVLARDLAQMSKQLMFNTLREFASKHKQKIRONPEP RVQPDQMCATIGVDPLASGKGFMSMLGVGDFFYELGVQIIEVC LALKHRNGLITLEELHQVQLKGRGKFAQVSCDDILIRAKKLK ALGTGFGIIPVGGTYLQSVPARLNMDHTVLQAEKNIGVTVTS EIKASIKWETERARQVLEHLLKGLANLMDLQAPGEAHYKLPALF TDLYSQEITAREAREALP</p>
5641	27	332	<p>THEAVHLGRMVDFDPYKRISAKDALAHFVLDGRLRYHTCMCK CCFSTSTGRVYTSDFEPVTPNKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGRVPLCINPOSAAPKSFISSTVAQSEMPSPPLVWE DRMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN</p>
5642	199	1247	<p>THEAVHLGRMVDFDPYKRISAKDALAHFVLDGRLRYHTCMCK CCFSTSTGRVYTSDFEPVTPNKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGRVPLCINPOSAAPKSFISSTVAQSEMPSPPLVWE DRMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN</p>
5643	1	847	<p>THEAVHLGRMVDFDPYKRISAKDALAHFVLDGRLRYHTCMCK CCFSTSTGRVYTSDFEPVTPNKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGRVPLCINPOSAAPKSFISSTVAQSEMPSPPLVWE DRMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN</p>
5644	83	1138	<p>THEAVHLGRMVDFDPYKRISAKDALAHFVLDGRLRYHTCMCK CCFSTSTGRVYTSDFEPVTPNKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGRVPLCINPOSAAPKSFISSTVAQSEMPSPPLVWE DRMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN</p>
5645	537	799	<p>THEAVHLGRMVDFDPYKRISAKDALAHFVLDGRLRYHTCMCK CCFSTSTGRVYTSDFEPVTPNKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGRVPLCINPOSAAPKSFISSTVAQSEMPSPPLVWE DRMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN</p>
5646	3745	3328	<p>THEAVHLGRMVDFDPYKRISAKDALAHFVLDGRLRYHTCMCK CCFSTSTGRVYTSDFEPVTPNKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGRVPLCINPOSAAPKSFISSTVAQSEMPSPPLVWE DRMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN</p>
5647	288	800	<p>THEAVHLGRMVDFDPYKRISAKDALAHFVLDGRLRYHTCMCK CCFSTSTGRVYTSDFEPVTPNKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGRVPLCINPOSAAPKSFISSTVAQSEMPSPPLVWE DRMSBLDQLRQRAQLKNQIRDAKACADATLSQITNNIDPVG RIQMTRTRTLRGLAKIYAMHWGTDRLIVASQDQKLIWDSY TINKVHAIPLRSSWVMTCAYPAGSNTVACGGIDNICSINLKTR EGNVVRSRELAGHTGYLSCCRFLDDNQIVTSQDITCALWDIET GQQTFTTGTHTGDVMSLSLAPDTRLFVSGACDASAKLNDVREGM CRQFTTHGESDINAICFFPFGNAPATGSDATCRLFDLRADQEL MTYSHNDNICGITSVSFSGSRLLLAGYDDPNCNVMDALADRA GVLAGHDNRVSLGVTDGMAVATGWSDFLCKWN</p>

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S80 ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (As-Alanine, C-Cysteine, D-Aspartic Acid, E-Glutamic Acid, F-Phenylalanine, G-Glycine, H-Histidine, I-Isoleucine, K-Lysine, L-Leucine, M-Methionine, N-Asparagine, P-Proline, Q-Glutamine, R-Arginine, S-Serine, T-Threonine, V-Valine, W-Tryptophan, Y-Tyrosine, X-Unknown, *a-Stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
			QRVLELPITTPAKMGATKEEREDTPQLQSLALELALGGCCVD RQEVARITTKQLPPVVPVSKPGALRRSLSRSSMQEAQRG
5648	7	1518	VLSLGRHIALREVGAEVPPPTCSFNICSLGQQAGNTDWSLTM APQSLPSSRMAPLQMLGLLMAACPTTCLSHQNLKCFALINPEX STSTETKERKETKAREELDAEVLVFPHTHEWQALPQQAVPAGS HYRLNLQIGTEREAKLQYEDKFRNNLKGKRLDINTNTYTSQDLKS ALAKFKGAGMBESSKEDKAGQAEVKRLFRP LEELEKDFDLNVV IETDMQIMVRLINKFNSSSSSLEKIALTLEFYVHQMDNAQD LLSPGGLQVVINGLNSTEPLVKEVYAFVLAGAFSPNPKVOYFAL EGGALKQLLVILATBOPLTAKKVVLFALCSLLRHFPYACQFLK LGGLQVLRLTVQKSGTEVLAVRVVTLTYDVLTEKNFAEEAEALT QEMSPEKLQYQVHLLPGLWEQWCETVHLLALPEHDAREKV LQTLGVLLTTRCDRYRQDPQLGRCLASLQAEYQLASLELDGE DEGYFQELIGSVNLLKELR
5649	1172	3006	MLQEQDLAINEEIRNIQEEKESTELRABEETFRVTSQSMBAEAL KQLRKGSIPTSLTDLASLASAPPLSGRSTPKLTSRAAQDLDR NGVMTLPDLRKRRKLLSPVSRRENREDKATIKCETSPSPSPR TLRLKLGHPALSGQEBGKSALEDQGSNPSNNSSNQDSTHKGAKR KQIKSSIGRLFGKKEKGRLLQLSLRDGATGHVLLTDSFSPMQEPM VPAKLTQAKEDRKLKKKHG / FQARRKMPFAQNDGPTVVSWL ELWVMPANWVAACRANVSGSLAINSLDTEIQEIGISNALIR LKLRLAIQEMVSLTSPSAPPTSRSSGNNVWTHEBETLESTK TDSBEGSNAQTLAYGDMNHEWIGNEWPLSLGLPQYRSTYHCLV DARMLDHLTKKDLVHLKNDSPHRTS:QYGINCLRNLYDRKE LEKRRRESQHEIKDVLVWINDQVHVQSIGLRYAGNLESQV HGALLALDENFDHNTLALILQIPTQNTQARQVMREFFNNLLALG TDRKLDGDDKVFRAPSWRKRFPRHHGRGMLASAEALTPLA GFRVSTLGTLPQPPAPPKKIMPFAHSHYLVGHMLSAFED
5650	1172	3006	MLQEQDLAINEEIRNIQEEKESTELRABEETFRVTSQSMBAEAL KQLRKGSIPTSLTDLASLASAPPLSGRSTPKLTSRAAQDLDR NGVMTLPDLRKRRKLLSPVSRRENREDKATIKCETSPSPSPR TLRLKLGHPALSGQEBGKSALEDQGSNPSNNSSNQDSTHKGAKR KQIKSSIGRLFGKKEKGRLLQLSLRDGATGHVLLTDSFSPMQEPM VPAKLTQAKEDRKLKKKHG / FQARRKMPFAQNDGPTVVSWL ELWVMPANWVAACRANVSGSLAINSLDTEIQEIGISNALIR LKLRLAIQEMVSLTSPSAPPTSRSSGNNVWTHEBETLESTK TDSBEGSNAQTLAYGDMNHEWIGNEWPLSLGLPQYRSTYHCLV DARMLDHLTKKDLVHLKNDSPHRTS:QYGINCLRNLYDRKE LEKRRRESQHEIKDVLVWINDQVHVQSIGLRYAGNLESQV HGALLALDENFDHNTLALILQIPTQNTQARQVMREFFNNLLALG TDRKLDGDDKVFRAPSWRKRFPRHHGRGMLASAEALTPLA GFRVSTLGTLPQPPAPPKKIMPFAHSHYLVGHMLSAFED
5651	646	1869	ARQQQRQFWG* KAKAKGFASESPIV* EUSGWBGFASF* TPGSTL AWHGAGGIR* ASGLTAAGASAJAA/PEPTRQGPAPAGCGRAPP WPAFLRVPTGHRAPPRSRAPAPALPASHTAAALSPASPAGP ADP* LPHSSQSPPRG* RWGRSRAPAPAHPEHPPAPAGSASQ QTFQWSSCCLAQWQAEPLGAPGAEDE/VPVPPGRGPTGLTGLS FAGSMAGLQAGY* AGAFQTOATAPRANQPTVAAAHNCRV* GSA PALHRAPAADPGSFLQAPFAPAMASAPAGGLSSSDYCGGLGA GWRAGTSPRELLGAGCLSDNWARCPQGPAP* GCGQCTTIPASA CMPSPPVEGSLGRKXHGGLDLPQAR* GWEECRRAHILVPLRL LGPGRGTGRSPSS
5652	735	343	HEKIKYQHIIQKESFSCPEPACGKSPFNFKILKEHMKLISDTRDYI CEFCARSFRTSSNLIHRR IHTGKPLQCEITCGTFCROKASLAW HQRKHAEVVAALRFECFCGRKFRFPDSVAHRSKSHDALLA
5653	66	1401	RGRIQSGRIRLTGLVLLLELILGALQHQHVRSHGKGGFLPPL CFPQCPQGTREGRRLSKKATEPQLAMAEV* LKDVMDPTL GDWQBLGLQGGDTFWDALDNCQDLFLDPPRLNLTSHFDGSD LEFLAGGSFEATSPDVTETKNSPLNEDFFREGPSQI/SDVQI GWLBLQFRRLVYRHLVR* FARRSRKSEV* CHQGRKSGHQ

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, * =Stop Codon, / =possible nucleotide deletion, \ =possible nucleotide insertion)
			ES*TKSRQTSCVHRFHGRRFHG\DNVSEKILTPAKSKRYGDEFP SYSDHSQCDUSVOEGKPKYQCCEGKSFGSGYKLTQHMITHTREK PTVHQCEQGFDRKASHSGYKPTHTGYKFCVNEGYTFPSQSTY LWHQKTHAGEKPKCSQSDSHPPSHDTQSGHQKTHDTSKSYNCN ECGKATPRI\PHLTRHQKIHTRKRYECSKQCA\TNLRKHL\QHQK THAANV
5554	3	598	TLELFFGRRFEGWRRCGAFAAKNSTGGNVSTNQRRUSVRMSAL NWEFFYVIGGLASITARCOTPPIDLTIKTFQIQGQNDNAKFKELII YQMGJALVLC\GREBHLKALISG*VGLHAFPLCHCSLFPHMGIDFR PLRIHQSVKSLCY*KEGL**/NFSLLISTSKYIYAADVLEKLFYIQQVTDNNKKILCKFKII
5555	2	867	PEFGTRAFQOLHFAAGRRFPDASAPFPEPTVLMDTFPLSPFPE PLSYSPVFPAVARVLQPSQSDYRAAGMPCISGGGGGGGQDPELC ATDEMIPFKDEGDPQ\REKIFARIIVNPEEGDLADIKSSLVNES EIIIPASNGHEVARQAQTSQEPYHDKAREHFDGKIGPDGLYNGK PSYSSYSGYIMPMNMNDPYMSNGSLSPPI\PRTSNKVPVPSQSH AVFPLTPLITISYDEHSPSGSHPSH\PSDVNSKQMSRHPAPDPI PTFYPLSPGGGGQITPPLWGGQGP
5556	228	1066	PRRVFLPEFASGPGAFFHSGLRQLSLTKDSAGCFSQCRSRAM LVLRASGLTKALASRTLAPQVCSSFATGPRQYDGTGYEPRTYLKL PSNMMAFNEILKFNHLRSTSYSELVGSFWSVEGRGTRNKVFHIWK YDNFPRAEVFEIA\ANKKWEVJQS\I\PHIARIDQDETEITYLIP *SKLIQPKPEGVYELAVQMKGGPALMGDAFERA\INAVNLGJ TKVVGVFHTEYGE\NEHVHVMWNSADSRAAVRHKSHEPDTISWG GVRESVNYL\VSQQNM
5557	105	1052	GURLQSPRVQNFQPPSKDTEBMSAGDSDAAMNNEEESSEER SSGQTESEESSEEMDDYERRRSECVSEMLLEKQFSELKEKL PREHLSQLRLLEEVEGAEAPFTEYPLQGLQRLKIRIQVAGIY KGFCLDVIRNKYCEELQGAQHLESEKILLYDTLQELQRRIRQ REEDRQLSLLDSENNDDKLAAGSSRSWDSLEPPSKRKAAPLVSG FYIYVNLQSIDILEDDWAIKARAASVPQKRSD\DLDEPAVHSQ GDQSSWHCTQDSRLFPADRTHRPLRVCPARLLWCCWALPLHL ALVCTPPL
5558	2346	3541	TEERVNVEPEPDDVCIQEDPWNLNISKTLVDNIQRYVEDGK NQLLALAKCTDTLQGRDAIFCQALVAUVCTSSQLALALGY RYRWNGEYESRDRASRMLKEQVATGVLLHCQSLSPSTYKKE RTMLLEDIVTLLSELQNVTFSPKQLDENYVANINVFYHIGRSQA LKVI FYLDSYHFSKLSRLSLEGGASLRHLTALFTKVLENVGLPS PGQAAREDLQCDINQASLEKQYQYKRLAPYLERSNLTDTAST TAVKIDQLIRFINALDELCLRMKSPVHPKPGAGSVGAGLIPIS SELCYRLGAQVMVCGTGMORSTLVSLEQAALLARSHGLLPKC IMQADTIMRQCPREVLAKNLRVKDQMPQCAPRYLRLQCPKN GDL
5559	2	696	WKRSGEVSFKGELGAWRGNRGRPKTI\GRAAAEENEDRTLGHLLE GNRSGQPSPLRLIAPQLKARAAADKGLA7VPPSSSFGSHSGPC\ REKSHGQRHGKSGRGAHLEKPSGLRAGAP\TDHGCGGAPAVYA AAGRRNVQKSSQATLEERESELSNSNPAASGASLEPPAAPAPQ EDNDAGAGG\AAVAGAAGGAKRFLQGVVGGYGRFWMVMSQKRL PRLQKQELNTLY
5560	229	853	PVTMTAFSELPMPLILNLIVSLGFPVATVTLIPAPRGHFIABLL CQQLNKT'SRQOTPKSQGVISGAUMLILFCFIPPFPLFCVKE QKAFPHHFEVVALIGALLACCMIPLGAFDDVLNRWRKLLPL TAALELLMVFYTFNGNTTIVVPKPPRI\LGHLDOIQR*SYHCC PYGTIEREPFLWLHILLQVFLCCLCVFPDFPW
5561	2	473	INLYSPSCGGTPKLPGLPREAAALGASFLAABPLPVTYRSGSL AGMAVTCDPKAPLSICTVTLVFLQLPLASIQCN*GTDSCASRGQ AD\DVGTGPHAPI\AMAGGHVRLQCLFPNI\SABDKELRMYRCQP SLAVHMERGMMDGEGRQWYRGRT
5562	2	1318	LKSGRCRGRSGNRGVKAAADAGLQGRGMLGVCRLLESVRFCSA PFFKHKPSAKLSVRDALGAGQASGGRKIKQGWRSVRSQKVLFL

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E= Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *-Stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
			LHVNDGSSLESLOVAVDSGLDSRELTFGSSSVKVGQGLIKSPSKR QNVELKAEIKIVGNCDKADPPFKYKERHFLYLELQYPIHFCRT NVIGSILRIRSEATAAHSFFKDSGFVHIHTPIITNSDSEAGE LFOLEPSGKLVKPEENFTNVPFLTVSGQHLSEVNSQAFITQVFT FGPTFRAENSQSRRLHAEFYMTAEISFVDSLIQIMQVIEELFK ATTMVIVSKCPDVELCHKFIAPQKDLHNLGNFLIISYTE AVSILKQASQNFITTFEWGADLRTHSEKYLVIHONIPFVINY PTLKPFMRDHEGDFQLEGSVAHSLGNILLISVIVGQP
5653	119	698	PADGSEIAITFGFSPBLEIDUPKYKCFPLGASGCGAERSLL VGSYFEKPIITFDVAIEFTSEMQCLDSQQGLYKKNVLENRV NIVPLGIALTKPDILTCLGQKEPANIKNHEWAKPFTCSHF QDLNAEQDIKDSQBEALIKKYKYGHANFQLQCKSVDECKVI KEHDNKNQCLIPKTKK
5654	118	572	SLSMESNHSGDGLSGTQKEALRALVGRYQYGLVQENQGRYQ GPPGWDAAPFERGCEIFIGKLPDLFEDELPLCEKIGKIVEM RMMDFGNNGRYAVPTFSNKVEAKNAIKQLNRYEIRNGRLGV CASVDHCRFLVGGIPKTKK
5655	347	702	VVQHLITLLHCERTSPANTSELPLVQDSNTTASDAGSELE STEVEGRKRGRGPRPPTSTNKKPKSPGSEKSTAGIRGAGRG RANHPQONGEGEPVTLFEVVKLGASAMCR
5656	213	540	VSCLPTSCRMITLNNQDQVPFNSHSDPEYHIAALVYFSCITFI GLFWNIALAVSCITIRRTVTITVIMNVALVDLITFMTLPPFM FYVANDVPEPSTYQQLGA
5657	1	695	HPLESAISLHPSVSLGVSICVRESALAEAVVNLKRRRARVSGP SCDAASSTPSTFRPGVAIYLVEFRGSRRAFLTLARSKGFR VLDACSSEATHVMMETSAEEAVSQGERMAAPPGCTPALLD ISWLTESLAGAGQPVFVECHRLSEVAGPSKGLPAMPMAYACOR PTLTHTNTGLSEALELLAAAGFQSGSEGRLLTFCRAASVILKAL PSPVTLSQLO
5658	691	894	CSFLFCITPDLFLQFLLRKEEBAVLVGGENSESLDGLDPOADPO VLVRTAIRCAQAQTGIDLSGCTKN
5659		1	DSGAPBGLSLMSTOGLSMHAHFQAYTPFTYLHARKRRGEIGD ADRFMDRYAHKSAQLYFLVCMIPQDVYFTIKERNHFFFPK ARGAPTYKSGSPIGSPITTTFTFRPSPNTAHAPHLASMLQKL NSQ
5670	3	373	SEBCLTMATPILLPLILLCTVSVAETLACFSSVSVSPQITAK IYSGDVLAKYAKNFQCKGQAFVLVIYQTERPSGIPERFSG STSGTITVLTISGQVDEADYFCYSATNDPLNVF
5671	280	524	KFPPTPTPHIEMSAITLWQFLQLLDXHEHLIOWTSNDGE FKLLKAKKVAKMLGRKNKNMNYDKLSALRLPMT
5672	2	557	FVPAETPDGVNLPSPERDPAKAKRSLLYIRTVESKHLPAKDITGS SDPYCIVKVDNRPILRTATVWKLCPFWGSEYQVHLPTTHAVA FYVMEDELASDDVIGKVLCTDRITASHPKGKSLPSHTGLSP NPSPHSRTSLGSVMSPAQKPLFSLPEAGATCFPGLCSEACCS QAWLLPLP
5673	327	696	ITVADQISHNSAGRIKONTRIPECITSSAAATLAPHTMEGESV KLSQOTLQAGDDEKNORTITVNPAMHGKAPKVMNELRSQQLLC DVMIVARDVEIKARHVVLAACSIFYCAMTGDMS
5674	17	984	GGSNKGESTSAVLSGFVLGALAFQHLNLTSDTSEFLGSEVKEGE ARNLTDSQMDVNVITDITQKYIPCYQSPFNSSEVNEQA LKILSNVKNVNVYKTRRHSDQITLRELLKNGLOHSTSD DLNVLTLPSITTESCTHRELSLYKPKQLHPLRVPLVANIIG HSEGLKYKTVSGSCMSTGFSRAVOTHSSEKFEEDGSLKEVIKIN EMYASLQEEELKSICKKVKESQAVDKLVKDVNRLEKEIEKRGGA QTAAREKNIQDQBNITFLQALRTFFPNSEFLHSCVMSLEKID MFLKAVATITISM
5675	80	753	EGSRKGRPTIRLARLSARAGRIMHPPGFSRRLINFRGVSECRPPG KSGVPVSPGSDGKHWEEPRGMFSLMASCWGFWKRWREPVKRTI LLMVGLDNAGKTATAGIQGEYPEOVAFTVGSKINLRQGFVEV TIFDLGGGIRIRGIWKNYYAESYGVIVVDSSDEERMEETKAM

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5676	2	930	SEMLRHPRISGKFIHLVANKQDKGALQAEADVIKCLSEKLVNE HKCL FVSSPPPRPFVQPARPGGFLSORRSLLCQASTPAHVGVNRSFV RDLARNDGGEESTERTPLLPAGAPRAEAPVCOOSARYNLAILAFPG FFIVYALRVNLGVALLVMDVSNITLEDNRSTKACPEHSAPIKVE HNQTGKKYQWDAETQGNILGSFFGYITQIGGVVASIKGGKM LIGFGLGTAVLTFTPTIADIVGGLIVLRALBGLBGOVTPPA MHAMWSSWAPPLERSKLLSISYAGAGLQTVISLPLSGIICYVM WTYVFIFFGTIGIPWFLWMLVSDTPQKKRISHYEKEYELISS L
5677	1	1028	PRDGLFLARLLSVPLCSGFCPLTSLSGQSGNSGGLVAAHAA VTAETHPLPLAPIAVQSQVKPACQVRRPRAVLALALQGP GRSLPGLTAANTMSSFGSEALEKKLGLSNGSQSVOTLSWLTHR RKHAGP IUSVNHRELKAKSNKLTFLYLANDVIQSKRKGPPEF TREFESVLVDAFSHVARADEGCKPLERLNTMQERSVYGGFEG IQQLKLSMEDSKSPPKATEKKSLKRTFQIQKEEDDDYPGSY SPQDPSAGPILLTEELIKALQLENAASODATYRQKIASLPQEVQ DVSLEKITDKAAERLSXTVDEACLRNGPGTS
5678	3	593	SSSPSSSTPSLPLFFVILLQGLRLQLLGGPARISSGAGRAAPCG GSGRTAAPRTADPAAGS.MINTMINEFRRSLSVPRTEIERE SLAEFTSGFMQLHRRNENLQLGFLGRDPQBCSTFSPDSDGEE FQULSPVOVQRRQRQR7SMEVRSAGALPQVAGCTHGVHRR AALAQDPDYSKRLSLPMXI
5679	2	623	LNSKVDIVFVPGAIWSDTYGSAABWGDADGGQEDDSGEDE DDAEVSQCELIHKPSTRDYIMERSIPMTLKRYTQACSFERNVQL LSENYTVAQTUNLLAEKLIQGVFVQVQVETVENHLSKSLKH FDPKADSIPTEEGETPAWLEQMTATITWRDLFYKIAEHPDCL MLNFTYKVGRLVLELRKVFNVFVWLLVCFI
5680	258	592	RELTSSEKIQNRNSRTFLESLLHPQPSYVGGFMOKKKKKIE IAGPSNFERRVHTGDPQEQKFTGLPQGNHSLADTANRPKPV DPSCITPQLAPMKITVRGKFC
5681	45	869	LLCAKTLQVTKESQABGYNSGGINNHQAEPRFCPSFCWMSRA RQTPQRLRKEAARPTPGSCPGGTGMDGKCSVMKFLPLVFTL PFSAGLMIVYF TAVEDDKLPLNSAERKPGVGHAPYSIAGDDP PASCVFSPVNNHDAFLVAVLRFIQLKPKVNLFWLNTSLGLVA LCLASPMWILLGVPLTMDIEIRNVGTLTGLTGPGLTCTWICQAL TLVNLKMBGRKVGITPRVILSASITLCVPLHHPGPKHPHVCSS QPVGPGHVL
5682	39	622	PRSCITGMRKWHIREVNLPEVTVQDAVCPATPFBGLSAGTGL QKINGITHCQVCPGAPAMPGSFWHEKMLLLVPLLLPGSYGL PFYNGPYTNSANDQHLGNHGGKLLNGVVLVETPEETLPTVQ GASVILPCRYEPEALVSFRVRVKKWKLSHNGAPKEDVLVAIG LKHRSFGDYQGRVHLQD
5683	89	778	SGSCATALITRCIANSVLISRLAWATTTCITCRVAFRDADQRA HYKTDWHRNLRKVASNA.PVTABGFQERVRQAARVESSEKGS ATYCTVCSKKIPASVAYBNHLSKSRHVELERKAVQAVNRKVEVM NEKMLEKGLVDSDVKDANNAIQAIKAQPSMSPKAPAPAPAK EARNVAVVOTGGROTHDRDPSEKPRLLQMFSCQAKKLAKESDD SEDREDDIC
5684	195	677	TWCFRGYLGPRVIRKALDEPPLIVTQDVSAKRGAPCEAKITX AKRLVKKVTFPHDSSTVBEQDDHKGPLKGAIVGVNLDGAY QGAVINKLTDASWYTVVFDGDEKTLKSGSLCERGFAPSEST LDQLPLINTZEHFGPVPVIGKKTNRGRYE
5685	779	1262	LLLQGVVHCFLLPPPPSRSHHITGFPFPHITGIPHPAIVTPO VKQEPHTDSHLNHVKPQHEQRKQEPKPRPHIKKPIANAPLYMK EMRANVVAECTLKESASINQLGRKHALSREBQAKYELARKE RQLHMLYPGWSARDNYVSPSSIPVALHS
5686	128	1181	CTWQVQNTLLDINDNHPTWKDAPYINLVEMTPDSDVTVVA VDPDLGNGTLNYSIQPPNPKYSLSNLTGKRITTHAMLDRENPD PHAEALMRKIIVSVTDGGRPLKATSSATVFNVLDDINDNPTF

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5687	17	517	<p>QNLPLFAEVLEGIAGVSVIVCVVADLEDEGLMGLVSYRHFVCMF  RMDFLINSSGGVVVTTTELDRERIAEVQLRVVASDAGTPTKSKST  STLTITHLVDVNDSTPTFFFAVNVSVSDVPR\GSGMSG-AARN  NDVGLNAELSYPTGGNVGDKFSVGYRDVAVKTVVGLDRETTAA  YMLILSAIDNGFVGKRHTGTATVFTVTLVDVNDKRPILQSSYV</p>
5688	1	420	<p>LTFWDLFGNCYLLKLTGIEHGAMFEGGVVWVS\CLYDSRLEPF  *SIMIRISLL*KVVIDSLQGLPRLLELL*LVNIDRCIILAVY  LRVEKTFATITLKNFTVKVDFSLIGELPLISMAILLKIMKID  DGYIPAVF</p>
5689	1504	3	<p>HELSGKILSMVSGNTCNWHPGSHSGGGGGGHTSKDRGEPAL  IWA/RKPIGTWTATKPTRAG*GGAEYQHPQCEGRPRSTSRG  OBG*GHAUVGPORIEIGKESLPLGPKALGF*SASQRAFEGGAH  GSTARKAPATPGTHPRKTMETREVAQGWAPGRSPQNDQHPHS  PGEHRPSG\SLPLACPPRAWKGAVASATGTG\PLQPLGSRGKQ  KLPRTREPLDAGWVVRKFPWSEAKDGLGQGRPSGMSDASB\  PQYIPKGRGSLWGLPILYLGPHWV*SRDLGP*GGGGGGH  GAPSTPGQGHAN*LVQCTSRKFGPCAT*GE\GSGLPGLCESK  EL*RVPPGSLGSPSTQCMYEPTDKHS\GGADAQLEVSTAGSRFF  GOELKGPLDAGRLWGPASASSSH*GG*ERARAGAHRGST*A  SSKIEQGRPRPGPTSDALADVGGHRS/GPHHPVLPGLTLPNR/P  GSPPPA*ASAGRKQTVSTLGGELL</p>
5690	1424	58	<p>PSPPAGVCAAPLPLLLALARRDRRPSQAEAPWQGGPAID  GAWRTSVSALRRGATG/APCSPGAEEAPWQGGPAIDG\DOELP  *VRSEEAAPRGCGAGGGGSGGPFVRRPGAGRGAGHAGQGRQDPEP  DGLRHRQGAASHARHRLQRLRPGHQNRHVRDRPDAPPGGPAP  GHAALPERTGVAEPFAKAGHAGSDAKRAGR*SQRT*ERAPRPH  PTFGKNGS\GCPGTCPNPHPGSSPPAAG\GFGAG*GNPGL  KAPRSRNP\SQLRTRKRPETPDCCPSPAGSSASATCTTS  SLSLGP/PGANBLDTA*CDR*HGP*CDKRGAGVAGDEPP*P  GNFVR\LLMLP/GVA*RHGTSFPLGSLGEMGGQ\DSGNLPGTP  KG*SHPAFTKST*SMERAKSYWNIPIR\DSRGQVRINCLAVEG  SEMAGFYSAPRPGTVTSLSSFLSPASEEH\PEGSSINTPTFFPAG  PEGDPGLNSGCLLP</p>
5691	107	550	<p>TSNDPSPQYNIEQNAKRGKKLVELPYIVKGMDSVFSG\LSFTED  VAHRMIATGRCTPEDLCFSILQVMQ*KGTSEWG*RFYIVEN*  GDAPLIFSPYLSLTGNCGFANLVETITERAMH\CGSPGPGSLMG  GVGVVVLLESVPLSY</p>
5692	1193	548	<p>TQANTRAKDRKGSVRALRIHLERGPPT*RGSPILQ\QVPCIQ  PSIPSSYP/GLPSSGSGSPGVGEQDQVIRPEQSPGSPAS3MPL  TSRVPKGRGALPDGSLSTRKGLPSPSTAGHVRVRSGRVIVVSG  RLNFWKATASNLQPRKVAIVGPT*DDGSGQDPSKFLGS  VGLASTQQTITDADSGPTGGDRATAGLGWTCNGVD</p>
5693	1258	1330	<p>LTIVTVVRKGTWNAQPHGCSNLVSRALDLSRRPSQNTETQAP  *QAGPPSLRPP\ERRR*APENPKRATGSRGRGLSAPWPFPA  RGE/PGSAPSHAP/DNSFRPSGTREH/PGPSRVLVSPSLFRS  PEATVWRSSRRPFLWFLRCCFWVSGQVFLDNVFLRF</p>
5694	3	1338	<p>GSKRPARSLHR\GSGHKSAGKNGSVTLTALGL*KLHQ*WT  QRCL\NMLSSSEFNASSSINSLSPTASRNNSTIVLTDSEKR  SLAESGLSWFSERKAPKKLEYDSGLKMEPGTSKRREREPES  CDDSSKGGELKKPISLGHPSGLKXGTVPVAV*SPITHTAQSAL  KVAGKPGKATDKGLAVKNTGLQSSSDAGRLDSAKXPPSG  IARPSTSGSGYKPPPATGTATVMTGGSATLSIKQKSSGTPV</p>

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			KPVNGRKTSLDVNSAEKPGFLAPGARSNIQYRSI PRPAKSSMS VTGGRGGPPRVSSSIDPSLLSTQGGGLPSRLKEPTKVASGRIT PAPVNTQDREKEKAKAKAVALSDNISLSIGSPSTPKNQASH PTATKLAELPPTPLRATAKSFVKPPSLANLKVNSNSLDLPSS DTTQCI
5695	3	1336	GSKEPARSLHRRGSGHKSSAGKWSVTLSTAGALG* KQLHQ*WT QRCL\NNLSSEEFNASSLSNLSLPTPTASRRNSTVILRTDESKR SLAESSGLSWFSESEKAPKILEYDSGLKMGPGISKWRREPFES CDDSSKGGLKKPISLGHPSLKKKGTTPPVAVTSPITHTAQSAL KVAGKPEGKATDQKLAVALKQTLQRESSDADRLLSDAKPPSG IARPSGSGYKKPPATGTATVWQTOGSAELSKITQSSGTFV KPVNGRKTSLDVNSAEKPGFLAPGARSNIQYRSI PRPAKSSMS VTGGRGGPPRVSSSIDPSLLSTQGGGLPSRLKEPTKVASGRIT PAPVNTQDREKEKAKAKAVALSDNISLSIGSPSTPKNQASH PTATKLAELPPTPLRATAKSFVKPPSLANLKVNSNSLDLPSS DTTQCI
5696	3	1338	GSKEPARSLHRRGSGHKSSAGKWSVTLSTAGALG* KQLHQ*WT QRCL\NNLSSEEFNASSLSNLSLPTPTASRRNSTVILRTDESKR SLAESSGLSWFSESEKAPKILEYDSGLKMGPGISKWRREPFES CDDSSKGGLKKPISLGHPSLKKKGTTPPVAVTSPITHTAQSAL KVAGKPEGKATDQKLAVALKQTLQRESSDADRLLSDAKPPSG IARPSGSGYKKPPATGTATVWQTOGSAELSKITQSSGTFV KPVNGRKTSLDVNSAEKPGFLAPGARSNIQYRSI PRPAKSSMS VTGGRGGPPRVSSSIDPSLLSTQGGGLPSRLKEPTKVASGRIT PAPVNTQDREKEKAKAKAVALSDNISLSIGSPSTPKNQASH PTATKLAELPPTPLRATAKSFVKPPSLANLKVNSNSLDLPSS DTTQCI
5697	1147	47	PSIALSPFACPSAPAFRRSTISRLQPSIPATEAAPFPEPVFAA QGPATVQSVEFVFDRLDRSLFEDITPARDEKKVGAKAAQDS DSDGEALGNNPVGAFQDDVDLEDQPRGSPPLPAGVPVPSQDITL SSEEAEVAAPTQGPAPAPQCSPECKWSSIPASKPRGTAPT RTAAPFWPGGVSVHTGPEKKSSTRPPAEMEGKGEQASSSESDF EGPAAKMLSFVMDPDPFSSGSGSTORRADEFPVRDDPVDVTE DQGPAPPPPKLLDPAFLAQSDDDLFQGLEAGPKESSEEGK ECKTPSKENKKKKKKKEEEKAAKKSKKKSKDKEGKEEER RQQRPPRRSERTAA
5698	2	566	GAAAEAFQEDLPFLSQSSRFQEQGKNKSTIGVSPFXDVAEDPT QEEWQQLDQKQITYRDVNLNENYLSVGYHIIKPDVISTKLEQ GEPFNVIRGELLQSQYDDEVNQDLDLIERIQEENKPSRQTVFI ETL*/R/ERGVNPGNTFDVETNPVPSRKIATYHLSNCSER*/G NASSEYISDGRYARMKADECSGGKSLHIKLEKTHPGDQAYE FNG
5699	2	1448	RVRQPPGLWVRKTVFAMOCFAGLSRVGQVAG/DPSLPSFRGPRD RAHRTIQTARHTKLYVQGPASGPPPLRVSTQVAI*DEKPLA RFS/GRNTAFPPQKQKAGKAAGPAAAGRVAMR/FGHGLLAS DQSSSSKSGSWETPVVWS*AGQGWVSGLLLDGSPGSPSL*RS TWLVQAGDPRSGVSGSWPQSGSDIGWALAGW*H*DPHT WTKQWTE/SAPAGGQ/VAPAPROPTAGHHCILT*TESQVSN VPILQKPSGALSRETEPAGWVPPTRHE*DDG*TAAPASOGAP VSTPTWAGTF/LNASLGPDIQSGKPGCRPPCALPKPAGPERSA* GSGLGCR/SMLPSSSGPPDAPGPRRLAAGHTEASARCPAAAA GWQPRRPGFAGRAALPGPPHPSS*REIAGLPGPGN*TLDPFLA HPAHEPGSAPPWGLAGWAAARASLWPSLCLCSFPVATPVAGL FPPGHS
5700	923	597	NGHKGVWEINII*RRSNIIHNSISSEHLNQDSFFPPPTNSARS KLIHSTGTAKNTGLPLSGAPQRQAVSGRTICQFSSCLOQAYLD E*CSIASLSLIKAILRVSVLSR
5701	59	410	IFEKICSD/QEPISEINPQICSEWLFIDKQAG/NIHATGKDSLN KWNKNMLSTCR*MRGPPYPTPTTKINSK*/R/DANIRCTEVLK LSRFTGENLADTGLGNVFLDMTPKQPTKQK

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5710	1	562	LEQYDPPELADSSGRVVRKEKSDMMRTGCLLWSVTNGLPRAA ALRNPQKIPKTLVPHYCELVGANGKVRNPAPLQNCRAPOGFM SNRPVPTNLPLEEQIKPEPAEKQKFFQELSKSLDAPFDFCRHK VLPQLLTAFEPGNAGAVVLTPLFKVQKFLSAEYQCKIIPVVVK MFSSTDAMRIRLLQMQEQFIQYLDEPTVNTQIFPHVHGFLOT NFAIREQTVKSMILLAPKLNANINVELMKHFAELQAKDEQOPI RCNTTVCIGIKISYLSASTNRHRLVSASFSAIARDPFPASRVAGV LGPAAHTNLISYNDCAQKILPVLGLTVDPEKSVRQAKFAIRS FLISKLESVSDPTOLEVEKLVHAASSQMCARASNAQWATG VSSLSIKILRSHTTAPTEINIPQRTPEVVAADAPTPVATPT TSGHWETOEKEDKTDASDSTADRWDEDSLSQEAESVLAQD DNSTGGQVSRASQVS\TPTTNFPQSPFGAAGK\RGLLGTGLA GAKLPGATS*RYTAQQRV
5711	1526	1110	RRHPFQWTVTQEAESHHDVAFSTSTPVLVPEESAPQFVIRSESS SGIAKAVLSQQRPSLFHECAHIFPS\SLQRHTINLDQIIP*LLM LSEERQHLFESS/IWTFPHNL*/FEIHRHGLSHGHWTLPFL QIL
5712	3	1391	GRKLQSLDISERKFLTLTDCVDPTLVIAERHQCIDITILEF ETVIDILMKCLTFPMSKRPTDPDELMDKVFSEVSPLYTPPTKPA LFSSSLRCADLTLPDISQLCKINNDYLAERS\BEVYVWLCL AGDLEKELVNKIIRKSPFICTLNPFLFEDGESFGQQRDSG/ TFR*YHWDIVMPAKK*IERCWGRSILPITLXMTSLILPYSN ENLSAAATLPLIIRKDTYEQNRILFDRLLKATPYKQNGIWK EARSVDIPLMRGLTWAALLQVEGAHAKYDAIKDPTPIPTDRQI EVDIPRCHQYDELLSSPEGHAKFRVLKANVSHPDVWVGOLD SLCAFTLVANFNNEALVACHSAFIPKRYLVNFFLKNSHVIOEY LTVFSGMLAFHDPELSNNHLEIGFIPDLYALPWFMTFHPVFLP KCIPIHMLDTLLGLFPLIYWE
5713	634	284	PVCANFVDRKPLFREDGRCQLAKLPDRFR*FQLGPMEGH TACCRSRRGACVQHLPRDIAAAS*DHPLREWVPLTSSATSP *RAVLTSPCSILGSADAASHNLGVSH
5714	212	613	WGLALGPTMSSTGGGSGQAGSGSSSTTNGSGGSGSSGPGAGAAD KSAAVVAJAFASVADTTFPERRNKSGIISEPLNLSLRSEPLS HYSSFGSGSGSGSGSMGGSADKATAAAASLLANGHDLAAA MA
5715	131	1979	ESASQQRKSKCLILTLKLLSGSNAPKRTSARFSSLLNLPHSOE QTPPASKLQGGGGLQTMGLHPVPVTAASPLPRVCLGAVAK/ GLPSP*LCPSGAA/GQLQGRGCLPSPLGAGKVSCLHPPGMVENN DSTCHHHGGLIARVTPV\SGKPGRLVKPPGRVCRPFHPAAS PRPFGS/SOLDGPRPOMHIAFPAHGGFVPTPHGGSEKTMSS QIRKKTPLK*PLKPAK\NNTQSSISIPVSGPLVPLVILLPSAGR QTPSGRGDAGKPTGWSLIPKASTVILPHDPSCLAQ*/PGL YKTKPQRNRRPL/LGSPS*GSQSTC*EY\GALQEPVIRPG L*PDLSCTLSNGSKHRRBGLSPRSLQPGRRGPAQLSGSCPT PENTACHSSGHVALQGHDSARDVSGSHVALQGHDS*QDQVRP VWRNIPLE*LGLSRETQATREGLVWISPGRAAAACVACAQALE EGPLRLPQDGRGQPCSHCPGRAAGQPRPGACAPRR/GG*DTPT GLT/GVPGTDPIRGGGRKPGQSGQETQGTPTVSGDPSPLQPK*E RQR/VGAGASSGVLSRGRAGGPSSANVEAMCLLLRHGSHSEL TDLTRNQTQSH
5716	1711	1370	RVFSLICEGPHGYQGVACREACRAASFOLOSAEPHRLCSHTD *LPK*GPGYIYQHCDNSTILCILYINISFNLPSYF*GVARYAC* RCPVL*SGFTIIVGGYSUCCMLPT
5717	44	1469	LPTKALESEBWSHYGCGKGRPLVPEGES*PLFSSVDPEESLD SGPGALVLESLLGQQLSEFSESESESESDGSDGLMOPFDESE

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			<p>GDSIGARPGLPYGLSDDESGGGGRLSAKSEVEEPAGPGGARGR  RPGACQLCGGPTGEGPCGAGGGGGGLPRLLLVSCRLCTFV  SHYSSHLKHHMOTHSGEKPFRCRCFYASQIWNLTTRHTRTHTG  EKPYRCPHCPFASSSLGNLRHQRTAGPPTPPCTGCRFCTP  RPARPPSPTSQEGAVPRRPEDALLPLDLSLHVPGGASFLPDGQ  Q/CGVGRASAGLDQMHQS/SLPFWTCRGGQGLLEHOGESRLS  AAMGRCMRGEAGGASGGPQPSDKGFCASCLCPFATHYFNHLA  HMKTHSGEKPFRCAFCPYASAHLDNLKRHVHTGSKYKCP  CPYACMLANLKRNRHISGDKPFRCSCLYSCNDSNMLLRHM  VAHALSPASTGNDVSMTHPQLPPTQLANDLCTCLPLSYNTF  S+STADPLH</p>
5718	120	284	
5719	48	428	<p>ELNRGSPFQPLCKGHLAVTGSWADRSPLIRASQGRLLALRTL  LQGGYNVKAVLHHTVPLHRACLGDHACACRLRAGNVAIT  IDGVTFLENACSSQSSCAELLLEYGAGQCP/ESCLP  LQAFRASEVPMVLVGTQDAISAAVPRVVRHSTRARELSLTLK  \RCT\YYE\TCGOTYGLQWNSVSDVAQKVVAL\RKQQL\LA  GPK\SLPN\SPSH\SAVSAASIPARAPINQGH/SGGGSAFSD  Y\SSSVPTSPISQRELRITIAASSTPIRQKSKRRSNIFTS  RKQADP\DEKKAAGCKVDSIGSGRAPIKQGLLKRSGKSLNK  EWKKYVTLCDNGLLTYHPSLHDYMQNTHGKZIDLARTTVKVP  KRLPRATEPATAGTSPRANGLSVERNTQLGGGTGAPHSASSAS  LHSERPLSSSAWAGPFEGLHQKSCSVSADQSGSRTSLSPGM  QIPASG</p>
5721	97	492	<p>RISFCCSLRHTERSNAVST/TVQGFRRRIENRHHGCV  VYVALAGGLFLERAYTYPAAIHGTITTFTRCILSRGTAA  SEMFYSILLTCRNLITPLRETFLNKYVFPDAVDFHLLASTA  VALDVLGSSPFGGAGAGALLGPRVHGIRAVLVARGVQAGP  GSLGVSHAAPPAIPQGAQSPHGRHGGGGAGLPDPRSPFP  QESVPASTSTARGPRVSRRLPQHPGPRGRRRRPGAGVGA  GRARGQAGLLRGQOQGGGABERERAAQARRGRRRPGPEP  GRPRRAAAAPGRAZADPQPPAPREAPADVREPADAPAPAPA  PPPPPHLGALTAGSGEERQSPRAETRLRGRGAPLP/PRAERGG  RPKQABQQQ/PKRPPTPARGPQSSGDPAMLPQAGLRTGGLAGT  KSSTREIPEMI</p>
5722	88	1043	<p>VALDVLGSSPFGGAGAGALLGPRVHGIRAVLVARGVQAGP  GSLGVSHAAPPAIPQGAQSPHGRHGGGGAGLPDPRSPFP  QESVPASTSTARGPRVSRRLPQHPGPRGRRRRPGAGVGA  GRARGQAGLLRGQOQGGGABERERAAQARRGRRRPGPEP  GRPRRAAAAPGRAZADPQPPAPREAPADVREPADAPAPAPA  PPPPPHLGALTAGSGEERQSPRAETRLRGRGAPLP/PRAERGG  RPKQABQQQ/PKRPPTPARGPQSSGDPAMLPQAGLRTGGLAGT  KSSTREIPEMI</p>
5723	88	1043	<p>VALDVLGSSPFGGAGAGALLGPRVHGIRAVLVARGVQAGP  GSLGVSHAAPPAIPQGAQSPHGRHGGGGAGLPDPRSPFP  QESVPASTSTARGPRVSRRLPQHPGPRGRRRRPGAGVGA  GRARGQAGLLRGQOQGGGABERERAAQARRGRRRPGPEP  GRPRRAAAAPGRAZADPQPPAPREAPADVREPADAPAPAPA  PPPPPHLGALTAGSGEERQSPRAETRLRGRGAPLP/PRAERGG  RPKQABQQQ/PKRPPTPARGPQSSGDPAMLPQAGLRTGGLAGT  KSSTREIPEMI</p>
5724		1841	<p>FINRAPPALPDASASPLSPHRRAKSLDRRSTEPSVTPDLLNPK  KOWLTQYEDGQKWHFALADQSLRYRDSVAEADLDGEID  LSACDYVTEYVQVNRGFIHTKSGEFTLSAMTSGIRNRWTQI  MKHWHPTAPDVTSLSPEEKNNKSSFCETCPRTSKCEALGEP  DFDGRKSKAKHRRREGRSKTFDWAHFRICQALACRERGVGVP  ADTHADMPREAHGBLREERAKREERKRPGLADATDGGPTE  DAALEWERSPOLPKSDIKHWHVHVEICRPHACVETPLREBK  QVPIAPHVLSSEGGRSLSTHETLSLEKELESCKASDILLIC  NRLIQQLRVALGRQSAEGYVQMTCEGRGAAMETHQCKIE  DLQQRQRELEKREKDRLLAETARTISAIBAMKNAHERME  RELEKSRQSQISSVNSDVEALRROYLEELQSVQRELEVLSQYS  QKLENHAHLQALBAERQALQCCORENOELNANGLNNRLAE  ITRLRTLTDGGGEATGSPLAQGDAYELEVPSSGARPCLTQLC  TOEPQCSAAMPGLYRVGGOTDIRQSRQCPQRSKPEGGREQ</p>
5725	3	1049	<p>VNGHSEBTSQSPNKTPEHDSGDSVLGSLGKSTSDLSFKSPQV  SVVKSHTINMEIGGLIKIYDILSDN\DLSHLQPLK/FTSADV  KNIVRSKAATLLYDQLQVFTGSSSSDLSGTAKAIPKPSNHN  PE/GAKYKRPKRWAKHNLKYNVCHSISITVAVRSGRHFA</p>

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			LQTSNRPQQTSSSAPS/VDQRAQ/THQYAKISANNFMFIN NVRANTAYHLHQLGPARHGEKWAISPNDRLLPAVTRSTIQQPS SVSSTASVNLGDPGSTRRAQIPEGDYLSYRETHSAGRTPPMMPG SQRPLSARTYSIDGPNASRPQASPSINEIPERTMSVDFNYSR TSP
5726	2	486	SRSLSMWNWNG-LPASSHSSKLPVTVGFSVCVRLRIGRPLGAP TRMAGVTPCILGPLEAGLFFPGSGGVITL/ESVGAGIPGSPRAG QGSFGSGGEPPLSSPSQPLPADLPGLLDPVGLLEVRPLAVT GLIFHLGQARTPPYLQLQVTEKQVLLRADGG
5727	21	221	RFILILKETRELPLWATGYAIVINAGKSTHNEQASCEVLTVKKK AGAVTSTPNKSSSKRSKSLNAGE
5728	2	877	GTNRKQSPERRKAWSSRGLGKAPAAALQGGVQPPRSG/LPG NALRAQVNPGRGPASIPNDLSLPLNDWPTTHAPAPDPFAVE GR/PWAGGRPPWPVSGLVGRVQCPLYSTSPAGPS/SGLSRPS GGPAGAGGADG/LPGRCPSPAWRAGSRPASCPDWIPQOQLML HRNPTS/GPPSQIGEGAEQGBGVADAPOIQCKN/GAEDPPAED EPPQVPEAGEEDAVPARBEGPGGTPTQADQVREPRFHLAEGGA KGSRRRLADFDQLPAGOMSLAPPPFPAVAVIRSNK
5729	1	1525	AGGAREVLTLLQGHFAGPVGAGHMMNQDALLERATDSKEPPEGL CPDVLVTRGTLHGQJETYTPRLILMDLKGSLSKHBGLYRDK QLDAAIAWQKGLTHKEELYPKNPYLQDFLAGBVLSSDGVMVRV KSIPIGKGGSSLPITATTPKPLIPTRASI RVNSDFLRVHLRPSI CHIQKTHNDSGEARLEAFPGQGSVLKEPKYQBELSDRLHPTVEE CYLQGLPILCDLNDGFSGVGAARAEGLQDEYSGRGIITWGLPL GYLHRSQQRNCTYLLANTAFLVHLNASSLNCPLSGSGSLR PRPPSPFPYHLADATLPHCSXIALALADTVVCSAYELSCSPVS MVHLAADMSPQKVKVITAGALIPFLPAQOGLPDSLMQPGGAT PWTPLSAQGSFSGTRCFQAQSVVLRGIDRACHTSOLTGTGTPPSSA LHACTTGBEILAQYLQOQPGVMSHSLLLTPCRVAPPYPLPFS SCSPPGMVLDSKPGGAJVESVPVFG
5730	1258	1713	KKQPAARETCVQKTVYPMERLLAQVQVHRISCFRCYSYCNK LSLGTAYSLHORIYCKPHFNLFPKSGNYDEGPGHRPHKDLWAT KIEBGFWRPFPNFZNCGRPLKSPGGEDCPSC*GGCPGSNY*AQ GSSSREKGGQASWNPILKVA
5731	122	443	RSRHSGLIPKDSYMYKPPRRPKRRQGS/CALPQGLTFKDAI EBSLBNKCLNPAQALRYAVMLNRYNLESVGLTSDSDWYMRK KPGSGKQBRQGVFLRVY
5732	226	772	PSRSSQSPRRSSRRRAVTVTLVCGPTSPSTSLPVLGCLAF PERTCSOLOADWADFGPPSPVPSWGATATGARKTILAPNIN LIGTKQAHRILALNKBGGRGKQDQGRLLKKVQGTQWLDENKLA QVSTNLLDFEVALHTVYBETCREAQELSLPVVGSQVLVGLVPLEK ALLDAA
5733	1	460	PALQEVNANALAWKQYENDARTLPEFTSGNDTSEPIIYDEES MRTACS PDGLCSGNGLELKPFTSRDPNKLFGGFBAIKSAYM AQVQYSMMWVTRKNANYFANYDPRMKRGLHYVIERDEKYM/AS FDEI/VPEFIKMDVLSRDPH
5734	3	968	RNSPESITSLVLLTANNFLVLLPAYSKNRAYAIPFTVFTVI GSLPIMLLITAIYSQFPGYLMKSLTSLFRRLGTRAPAEVLS SMVGSQGAFFPAQGVKPDNLLQVLQVOLDGSHKQAMKEKVRYSY GSVLSABEPQLPNELDERSVVEHPPPEYQSPFLQSAQPLFG HYTFVLLNLLANLMSVCIQVLLADLVLPARDPFIIGLILNC VTIVYVYLLNLLKVALGRLGYLSYPSNVPDGLLVGLVLEIS TLVCTDCHTQGGRRHW/KLLSLMDNTRMLNMLIVPFLRITP SMKIMAVVASTVIGL
5735	2	540	FFTCVAKAFNPDAQATVKKAAYSLPRVGGTSCGLPQARRISL ATPRLQYK/SSNNYQWRQRRISNPEYLFPLNTIAGRTYNDLNQ YVPEFWLTYESEELDLTPGNFRDLSKIPGALNPKRAVPYAE RYSTNRDDQSPPYHYNTHYSTATSILSWLVRIVSIFIELACLNY LKILT
5736	1	382	GTRFSTKSGYSQQQVAVTHCKGHQKNTAVANSGQADSAAGV

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5737	280	1041	TARLSVTPPNLFTVSPFPQDLFONPVYSTTTEKLASDLRANKV QES**ILPDSGIFIP*T*TSYLOSTHLRRAKLPOLLRR KACHLHLSLFTSNFLNPLPDLISLYSVEARSRANLPQCRKR LQTMRLAAGFYQSSHKDPLSAKEYTDYHNEARGPWPGWVG* RTADGSCGRPGDANHPPKSSSWRASRLPLGSGSHLDAYVG RDLBOGTAPLQSLRIPPOGRHPAPIPTGQAGPRDSGPGASP*V ETRPLTDGRR*GVVRPVGTAPAHAGTILRPRGAVEPSVSACVK APSPISQGCCGRCDAVPHRAWRTPLCSQ DTLSLACTLPITLPHTPSP*LSFL*PFGARAKSIPTKTYSNEV VTLNHRPPDLGGSTDIYSTQIDMN*GVQVWVGQCGKGGGLVTT ATQAPALFTVPSLPKQVGCIFYEMATORPLFGOSTVEBGLHFI FRILSEENALCAVEHTR
5738	8	460	SPORR3IRWVHTLHHPHRAWNAGIGRQGHGS*ALLQKAPALC FPTLLEFLLESLEPDLPALRAGLHLMAAGPHTHAGISD*LAET SAEVDGVPVGLSSPQSTIDTCLYFTSTGTGLPKAARISHLKI LQCGFYQLOGVHQEDVIYLLPLHYMSGSLGLVGCMGIGATV VLKSKFSAQGFWDQCGHRTVFPQYIGELCRYLVNPPQSPQAEGR HKVRLAGVSGSLRPUTWERFVRFRGFLQVLETYLTGRTVATINY TQGRGAVGRASNLKHYHIFPFLSLIYDVTITGEPIRDPQGHMA*TS PQEPGLLVAPVSQOOSPLFYAGPBLAQGLKUKOVRFGDVFEN TRDLLVCDQDGLFRHDTGDFKRWKGNVATIEVAEVEFALDF LOEWNKGVIV
5740	265	231	PAWLVKVTLCLESKTDLRKAKSHVSAQGLQVGRSLAGALWM*A YVYERVYN*K-SRWFALEQKHHPAGLSSSNALQNLFCGLMLA LQSELHLKYDESTQSWVSGACQGVY
5741	1	650	PKFTMRGRLVTLTQCSAMTLPLWTEKQDGRPPPLCGAIPASGB YVARPGDKVAARVAVDQDEQWILAETVYSVSHATNKYVEDDIDE EGKERHTLSRRRVLPLQWKNPRTDEALPQKEQLVALYDQCT TCFYRALIHAPPQPCDDYSVLFDTSYADQVSPPLNVAQRYVV ACKPEKKK*CLRAQSPSPNDTQDSQGRAGIKHIFPLKKK
5742	2	362	TQSVBILKRNPNVNLTKDGNALMTASKERTETIVQDLIDAG TTVNIIDPRSGDVT*IQAVRQGHVEIVRALLQFYADIDIRGQDNK TALYNAVEGNATWVREDLQCNPDTEICTQDS
5743	2	415	GKTFEGTDATEBTEIDLEETREKSPQENGLVEEVKPLGENOTDL KATGRKISPREKTPVLDATBEICKDLLEETGRREISPEENGPPEE VKFPDMEITDLTKTREGSSREKREVIDAEVIEITDLBETERE ISPOB
5744	3	703	TRRTTTSPTITKMTTTPAALLPTVTEITDELITOTPLQMTLEA VFTTANTCLSLTPSTLPERATGILLTEPSKZGPILTAESETVLP SDSWSAESTSADTVLITSKESKWDLPSTSHVSMWKTSDSVSS POPGASDTAVFEQNTKITKTQMDGINSNMKNEMPISQLMLIAP SLGFVLPALVAFILRGKLMETCYCSQKHTRLDYIGDSKVNLDV QHGREDEGLFTL
5745	1400	599	GKSRFVNLKHSKKTYSFQDELEDYIKVQKARGLPEKTCFRKM KGDYLETCGYKEGVNSRPTRYKFDQLRPSRTIQTYPSCNIPQT VENRLPQWLPARDSLRLDLSLYCQFTRDCFSEKVPPLNFNQOE YICGSHVGRVHYKHPSSDNSTSTHQAASHKQIHQKRRHPBEGR EKSEERSKSKKKSCSEIDLDKESIQKKTVEIISTVHVS*TE KLNKRNKKSREVDVSKKEBKRTKKKKGQOQERTEEEMWQDSI LQF
5746	3	821	SPASGLTPSPAPDGLDLQRYNSGPAVSAWSLGMVAVSSES RAGEBPPCPQCGKRFPRENSIAHLHRTHQPERPSPARALLE LEERALLREARLGRASSGMOATPATEGLARPAQSSAPRCP YCKKFPISAKREHHLHLHLPFWKXGLCSFGSSQRELLHNSLT AHGAPSRPLAATSAAAPPQPOQPPQPPQPEPSVQPEPQPEPQ EATPTTAPAAPEEPAPPPEFRQVQGSFTQSNFLEKHMRIKHA SFDHACPV
5747	2	1328	DRHVTLCIHLMPGSTGTAKTGGNRLTKGNCLYGNTRCFVHG PSPRGKGYSSNYRSPERTGDLRLERIKNRQOVDTEPKRNTTE BSSSPVRKSSRGRHREKEDKITVETPESSEKVEWETNRND

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			SDNGDINDYVHLSLEMKPQKIQRLMKLRQNMKREETIIIR KEVSPVVRVSKISPSPSLRKSSSKPKRKS SPKSSASSEKDKTS AVSSPLLDQQRMSKTNQS KKGKGRTPSP PPPIPEDIALGKKYKS KYKVKDRIEETKTRDQIDRGDIFERQKRDKPRSTSPAGQHSP ISSRHSSSSSSQSS IQRHSPSPRRKRTTS PSYQRTLTPLLRSS ASFYPSHSLSSPQRKQSPPHRRSPMRKGRHHDERTSQSHDRRH ERERDTRGKRDREKDSREEREYEDODSSSDRDRDRDPRDGRDR RE
5748	934	473	SEGPVPTFGLDAPLDAIFPYAGIQFSCYSILKHLKYKWAIPAG KKNENLQNLQSGSGVSIKTLTPDLDFKKLQVQGFHARAA FGQVRRTYKGLMDCAVCVLQKESALGTFKGLSPSLKALSLTGFH FFSYEFNCVPHCMNTASQ
5749	552	1	GFPVDPVRGSGTSLCAERPKMIRSGSFRDPTDDVHGSVLSSAS SASSTYSABERMSQSIIRKLRLRESQEKVATLTLSQASANTAN LVAAEFQSLVNNTSRHLIARTAREKDTLELDELRTDIFLKKH SRQAQVITQALNASEITTPKELRIKQNSDSSISSISNTSHSSI GSSKDADA
5750	22	866	IFISICLWNAHLCPFLLEKDCIDQVWKLQNLVFDSDGRTYLAQF ILEWNAVFLYYEYRKAKDQDIADKISSQLQIDLTGALGKTRFE QENYVAQLILDVRBGDVLNSCEPTAPPTQERLTKNLENDT ILNDIKLADCBQFQMPDLACASEIAILIGCITNPQKNPVHTLTE VELLAPTSCLLSQYKFWALQTSALILRTLEKSGSTRVERAMRQ TQALADQPEKTKTSVLKRLKIFTCCQVPPHKAIRQLASLLFEL GCTSSALQIPKLEWME
5751	3	751	SGSALRAWRCGAALATPPAPALPGMLYRLVAFPSAEFNLALA FAAGETPLVLRESSAHWMLAARASGETGYVVPAYLPRQLQLEQ DVLQAIDRAIBAVHNTAMRDGGKISLBORGVLQKLIHHRKETLS RRGPSASSVAVNTSSTDHHLDAARQPNVGCRAGFERQHSLEP SSEHLGADGGLFQILPLSSQIPOPRAAPTTPPPPVKRDREBA LMASGGSGHNTMPSGNSVSSSGSSVSSCI
5752	3	471	GPVCGVLSVARAQFWRCPPVHSVGGGGAALHGARLFCLSGAAT VEREMELRHGNHMLRVETBARARAKAERENADIIREQIRLKASE HRCQVLSSIKTAGTQFPQEGFRAPVTDREKVTATVNIPIFQSGQV ARCHQVQASVPSRCFRLCTAL
5753	34	483	DDXALPGGVCAPFAGVANIYTPPTGHRIRKLQDQSGGNIVAG GQEPKLIANYLDIGEIKKRPHEVVTNPKSVIHSRINLVGARPK PLQRPCTFLLANGDLINPASRLLIPTKTNQNDHVLQWVTEKI TLRSQAVHRLTYLREGLV
5754		331	TLHVHVVEPAGIEAATASRQEQVLQWKEKLGACEDARLVSSST ADALRTHSQVRDLSSWMDGIASQIGADKPCFSPSSLLGLPASPW NPTATPSPLTAPFSME
5755	3	888	LGDQFYKRALIKRCSYNSRLCAERSVRLPFLDSOTQVAQNCIYI MMKRRHGPGLAPQQLYTYPARCWKRKRRLHPEDPKLRLEIK PEVELLKKDGFTSBETTLALLRGGBGVKKVDAREESIQETQ RVLENDENVENGEENDELEDIEDIPKRNTRGRAGRSAGORERHD AASQEDHDKPYVCDICGKRYIKRPGLSYHYAHTLASBEGDEAQ DQETREPPHHRGNNRPPQSGPDGTVINNYNCDPLGSGMMKKS GPPELVSCADCSAGHLLSGSGKERYDA
5756	3	621	SSKLQALFAHPIYNYVREKPPGLASDAASQARLYYEPKVAR WNRHKKYRQZQNLTSIDPFLQRLRESWQVFLGIDRIGLYSR SSPPVSKLIQDWRHFTTSADYSQDEKALLGACDCTQVPSGV HLKLVLRFSDFPKGAKKIMMQQRDSPTVDFYFDFQRHNASI AAFHLRLILDPRVPPTVGRIVNVTKRIL
5757		473	YKDALLLPDNRQVVFENGTLKLTQVQKMGDEGEYLCVSLIQPO LSIQSCHVAVKVPPLIQPFEPFPAISGLQLYIPCVVSSGDMPI RITWRKDGQVILSGSVTIBSEKFMSSLSISSVSKHNGNYTCI ASNAATVSREROLIVRVPPRFVV
5758	1	474	FRKGAGAEGRGHEIRGERGAGMGGEFKVHRVVFNTYVPSGIRCA YNNQSNRIAVSRDGTGTVRIYNLISANYPQKPPFPHRESRZALC WARGQRLFSAGLNGIEMETDLQALNIKYANDAPGPGIWSMASP

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5759	2	1240	SGSQLLVGCEDGSVKLFQITPDKIPV GNAAPAGGQGVYVETPHMSDLFSYTTTGTCTVWV/NNQIGFTTDFR MARGSPYPTDVARVVMAPFIHVNADDPBAVIVCSVAASWNTPT NKDVGADLVCYRRRHGNEMDSMPMTQPLMYKQIHRQVPLKKYA DKLIABGTVT/LQRFEBRIAKYDRICBBAVGRSKDKKILH IKHNL DGPWPGFPNVGDGPKSMTCPATGIPEDMLTHIGSVASVPLEDF KHTGLSRILIRGRADMTKRTVDHALABYMAFGSLKEGIIHVRL NQGDVERGTFSRHGHVLDHQEQVDRCTVPMQLWDPQAPYTVCN SSLSRGVGLGPIETAMASPHALVLMBAQPGDFHTAQCIIDQF ISTQQKWRHNGIVLLPHGMEWGPHESSARPERLQMGNDND SDAPYAFKTFDEVSQ
5760	1	1221	VRDITSDLSLSWTVPEQGFDEPLVQVFKNGDQPKAVRVPHED GVTTISGLEPDBKIKMMLYGFHGGQGVGPVSAVGLTAQKDEMA PASTRPPTPEPKIPRLBELTVDATPDSLSLSWTVFEGQFDHP LVQYKNGDQGPKATRVPHGHEVTIISOLEPDKYKQNLVYFPHGQ QRVGPVSAIGVTAARSTPTPTPEMSAEPPDPPELGLRTVTG SSPDSLSLSWTVQGRFDSFTVQYKDRDGPQVVRVGGRESEVT VGGLEPGRKYMMLYGLHEGRRVGPVSTVGTAPEQEDVDETPSP TEPGTAPEPPPEPLGLGLTIVTGGSDPDSLSLSWTVQGRFDSFT VQYKDRDGPQAVRVGGQSKVTVVGGLEPGRKYMMLYGLHGBOR RLQGPVSAIGV
5761	3	1275	SCDMAAALAWITSPGQCKAVKASGURTVRDFIHRHCQDON VPVENFVKMGAIINTSDTVGMVAWYSLRFLCGQKQGPQSM RALGAQIKETTTIREACHDLSGRRLDYNHKAENWVQQAER ASKEQKRLERLQKLVPEPKCPTSPDYQQCHMAERLSDSVLK GMQAASSKMSVARSISNRKQNPVTKSQTDGASAGKRRFCWLGX GMELETARSGNSSSDDSDSAPSTSGMGTHAFKIGSNVEMAAK FPSSGQARVNVTHDGSPEQLQIPVTDSSGRHILEDSASLGESK EHMESVMTBSTQEKKASKEPREEPTGAGLKKDKETBERT DGRVAEVAPEERENVAVAKLQSQPGNNAVIDKETIDLLAFTSV AELELGLLEKLCRKLWALGLKCGTLQ
5762	2	344	GSYQCTPLSCQGGGGSGGRRRTPRGMPKRYEPPDPFRMYTI KSSREANWKKHMALEISIKVRSLASLSLTHALHSDN SLSRIPSDIAKLRLVYLLDSNKIK
5763	3	429	LDKDTGLIMLIRLDYELTQRTPLTILANDGGSEETTORVEINV LDVNDNVPTQKDAVYALRENEPSVTOLVRLATDSDPPNDQ ITYSIVSASARFYSYFDSLYRGYGVISVSRPLDYQISNGLTYL TVMANDAGN
5764	1	441	VCAKACGEMKQLLEPTDEQRYDNEEDSDVERIVEVVRGPELEK LRSLQYQGDVHAMRGKDFNYEYVYQREARVPLIFREKDGGLGK MPDPDFTVRDVKLLVGSRLVDVMDVNTCKGTSMMSQPVRYVE TPBAQRDKL
5765	1	825	QKILRLNNSHOPPTSSSSNCKDGGPASSGAGATAALADGLKAS VQASAPQGNSHKETSCKVKRSKTSKDKANLPSAALYIIPRIS STAKRQGVQGRPGHATGMNSALQGSVSSGGSGNFMNSSTZSTS AJATAQASCGSKSEKPGKSSSRGAKRDKADGAKRDKHDLQ GHQNGSSQAPSGHLYGFGAKSNGGASPHFGCGTQSGSVAAA GEVSKSAPSGLMCSNMLVKSSSESEHRIKLLKTEKVDPL TVAPPPIHV
5766	1608	663	SQLFSDVPASSQAMRLSDVTLIRGVGMVWVAGVVVLLIALV AMLSTTVADSGSNQILGAIVSAGDTSVLLIIGHVDHVLWQGNPF PTRELPHPSRGNDKAEAGEGEGDSTGEAGAGGVDELLEHLLD IQGLPKRQAGAGSSPEAPLRSSEDTCLPSPGLITVRLKFLND TEELAVARPDVTGALKSKYFPQESQMKLIYQGRLLQDPARTL RSLNITDNCVICHRSPPGSAVPGPSASLAPASBPSPGLGVNVG SLMVPFVVLGVVWYFRINYROFFTAPATVSLVGVTVFSPFIW FGMYGR
5767	2	892	NPRATPRPPTPELRLTGTIVLLYLDWRLMKERKMKANTKLVG SGFPLPSSDSDSLTEIDKIGFRNDANFDQNVADFRDAGGS LTVKVSSEERDPQSPBEIIEKEEMLSVIPSGRRENEPLDPP

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			HIDEFTLNSTPSSAAYDEPHLLVTRKQKLEKRRRLDTEAER LQVEKERLQIEKRRRLHLDMEHRLQLEKERLQIEREKLRLQIV NSEKPSLENELOQGEKSMQLQPDIEETKLKLERERLOLEKDRLO FLKPESEKLEKRLQVEKDRRLRIQKGBHLQ
5768	3	476	SSRSLSVSVPFPPGIVELGPPFAFECSSRLGSVAVTSQAGPA AMYAKDTPFTLVKRWANCSLELPASGPAKDAEPPSNKRVKPL SVVTSIANLIPFVKATPLKPSQTLQSRISFRSSRPDILAPRP WSRNAAPSTKRRSLKLSGETPDVC
5769	38	667	TKTKKQVREKATDQSKVKAFAEHCPQLVQVPGQSVTSKGVVHL TKLRNLSLDELRIHTELDNRTAMEIVKRCMLISLNLCLINWI IN DRCEVIAKESQNLKELYLVSCIKTIDYALIAIGRYSKTIETVDV GWCKEITDQGTALIAQSSKSLRYLGLMRCDKNEVTVBOLVQVY PHITFTVLQDCKKTLERAYQMGHTNNMSAASS
5770	1	484	DSRYDVTRKNSFLDEHSKLIARVCLQVQLEDFLPTTLFLA FASQLKKTSLSLTPDVPADLSVDPKLVSNMTPFORAGVNFPAI AKGGRILLADDMGLGKTIQAI CIAAFYRKWFLLVVVPSSVFT WEQAFRLNLSPLSDCINVVVTKDRLLTA
5771	168	741	GLPSACLRARNSREASGGFSRRACNSQDTRACYSGSPFS FECSHCSGSDHSSIGLEQLQVYMTLRSLGFLPIQQFAMLLRE YKGLPIQNYCTGLLKLGDRRKFLLMGKPPFDQDIGYFEGF LKCVLRKSGILTDSFORIKRSMSTSSANVSYDGAQPEAQA AFHRLADITHDIS
5772	148	383	EFLNALVSFSEHQIAEDKQFLQVLLSGGLFRANLLTQDNG ILTFSNLVTCSAIYHLPVFEPEPCGSVRDLVA
5773	2	723	PRVSKHNFCEMSNTRLQVEHPVTMTITVLVQLRRAAGE KIPLSQEEITLQGHAFEARIAEDPSNNPMPVAGPLVHLETPRA DFTSRIEIGVRQGDVSVHYDPMIAKLVMADDAQAALTKLRSY LRQYNI VGLHTNIDFLNLSGHPFEAGNVHTDPIQHHQLQLL SRKAASKEQLQAALGLILKEKAMTDTTLQAHQPSFSSSSGG RRLNISYTRNMTLKDGKNSK
5774	2	592	FVEEHTIRVVRGGSELNFRRAVFSADSKYIFCVSGDPVRVYST VTEECVHLHGRHNLVTGILQNPNNHLQYSCSLDSTIKLMDYI DGILITFTVIGCKLHALFTLAQARDSVFVIVKEKPDIFQLVSV KLPKSSSGVEAKELSLFVLDYINGSPKCIAPFNGVYVAAREP YLSVYFPKKTSYVTLSS
5775	3	538	SSGCCDPAASSSLAARNTVSKCPKSSSLKMGWDRKARQNG RLQGVYANGDITVQWMDANVKGQVWHKKCAIYEODMKFKG RDGYVTLSDQDTGKCRVYSGWHWGDKSKGYGTQFPQKSYV EODWCSQRSGWRMYVANGDITVQWMDXNGEGMLRLSQNP RP
5776	2	484	RLPQDCVQNLSESLGTLCPSSKGLLPVPPIDRITVELRLGGNF IIRHSRODFAMTGLVDLTLSENITISHIQPSFLDLESLRLHL DSNRLPSLGEDTLRLGLNLQHLVWNGQLGGIADAEFDLTLTLEDLLSYNNLHGPVGLRGDANVQPS
5777	2	949	QGFPEPGQDLFPQEREVDPSWGRGPRFLKGLKPRNDHLSVLKQ VKLEQALKDSAGLDPLGLCTYSPHCPDKAAGASTPENLGGSGSVSRQVHPDGLGREPTPELVEDRKSGCRPRNDRLSNV YRSGSGPTKPPINPLPKPRTFKHAGSGDKDGKPGIGRKEKR NLPLPLPSLPPPLPSSPPSSVNRRLWGRQKSSADHRKSYEFEDLQSSSSSSSRVDYVAQTKLGLYTLSENIVYDILDPMPKMP YEDIELHGRCLGKKCVLNFAPSTSSIPDTLTKQSLSKPAFRQ KSERNV
5778	1	1210	QRQGSVRLLLPVFLLEPFAEPGLVPEPEEGEPAGVAGEPGS GGPCMLQLEEVPGGFLQGGQGLSPSSSYSSDELSPCEPLTPPP NAPLGAPEPPEHLLNRVLERLACCATRDSASADILLDDIVLTHS LFLPTEKFLQELQIYFVRAGGMEGPBGLRQKQACIANLLHFLDT YQGLIQEEEGAGHIIKDYLLIMQESLYQGLREDTLRLHQLVE TVELKIPKRNQPSKQVKPLFHHFRIDSCLQTRVAFRGSDEIF CRVYMPDHSYVITRSKLSASVQDILGQSVTEKLYQSEEPAGREDS LILVAVSSSGEKVLLQPTEDCVFTALGINSILPACTRDSYEAAL

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5779	138	1671	PLPEEIQVSPGDTLIRVSEEDVANULTAFNHELPRCVHLEFV DYVPHGE EAVQVLIKISADVNARDKNNCTPLHVAANAKVCAEVITPLIS SVNVSDRGRTALHHAALNGHVEMVNL LAKGANTNAPDKKDR ALHWAAYVGHLDVALLNHGA E V T C D K K G T T P L H A A A S N G Q I NVVKEHLNLNGVEIDINVYNTALHIACTYNGDAVNNEIDYGA NVNQPNNGFTPLHFAAASIHGALCLELVLNNGADVNIQSKDKG SPLAMTA VHOFTRPS Q T L I Q N G G E I D C V D K G N T P L R V A A R Y G H ELLINTLITSGADTA KCGI H S M P F L H A L A A N A H S D C C R K L L S S G QKYSIVSIFNHEVLSAGF E I D T P K F G R T C L H A A A R G N V E C I K L G S G A D P H K K K G K G H T P L Y A A A N C H I C I E T L V T G A N V N E T D D M G F A L H A A A S E M D E R N T L L G R N S E L E A R L K E K E E A T L C L E F L I O N D A N I S R D R K G V N S I H Y A A Y G R Q C L L L E R I N S G F E E S D S G A T K S P L H L A V S E M P
5780	154	624	Q P R V I T C L F P G E D V L Y K S E F I L T V A R V E S N G E K S E P V S E I T S V V K G S H F P V G V F P R A K S F T P E S T I A S V I T R K T K I O M D L R T E R P S A V Q L C L A E S T R P R I T V E Q M E R I R R H C O A C L R E K K Q L N V I G A S D Q S F L Q S P S N L R N P
5781	19	941	R G S L G G H W R P F M R A A S Q C L P L S F V T G P H Q R A Y G N G P G G A F P A P P V S G T C P D L I V A P T E K A E G G S Q K N Q P P G E R A A H R D G E Q A P C R A G P T R K V A V A P R P S C * G P E P G E P R R L D R S P P L G Q V Q H P F T S Q D A R S A E D E A P S R H L G H Q P R A Q V G S R L D A L Q G P K T Q S I H T V T C R S F R Q K E D R S F K P Q A P K I P E H R Q R S Q A P P P L F V A P E R T C G G G * I N D P A L L V S P / P Q G S T P E L A P / Q Q P T G G P S R C R Q A L P P Q G * R Q Q F R Q R F / P T G A S R S H A K A G C Q G P P K I R N Y N I M D
5782	5176	1237	D R S K M S A A R S Y T S I D T Y T T A Y V M P L P E E P F P M P L P P E P M T P P L P P E P P E G R P A L P T E Q S A L T A E N T M P T E V P S L S E E S V S Q P E P P V S Q S E I S E P S A V P T D S V S A D P S V L S E A A V T V E P P P E P E S S I T L T P V S A V V A B E H V V P E R P V I C M V S E P M A S A E P T V L A S E P P V M S E T A E T F D S M R A S G H V A S E V S I L L V P A V T T V L A E S I L E P P A M A P E S S A M A V L E S S A V T V L E S S T V T V L E S S T V T V L E P S V T V P E P P V A E P D Y I P V P V V S A L E P S V P L E P A V S V L Q P S M I V S E P S V Q E S T V T V S E P A V T S E Q T Q V I P T E V A I E S T P M I L E S S I M S H V M V G I N L S S G D N L A P I G M Q E I A L H S G E E P H A E E H L K G P Y E S E G I N I O L N I H L L A K E B E R V T V C A G T S P V G E I G E K I L P S I S E T K O R T V L T Y P G V S E A D A G E T L S T O P F A L E D A T G V T S K G I E F T A S T L S L V N K Y D V L S L T Q T S H D W L I E S P S G G S E A D I E K P L P A K D I I L D L P S N I N V S S D T N E P L P V R D / D Q T L A A L I \ S L K E S S G G E K E V P P S * R E H L P D S G S A N I E D I N E A D L V R P V S S P R T W N V L P S P R A G L / E G P \ L L A S D F G P Q N L Y S P V V S S M P \ E R A S G S \ S G G E K G \ Y E I P V K V D T H E K S K K N R D R G E K E K R D S I L R S R S K R S K S E H K S R K L T S E S R S R A R K R S K S K S H R S \ Q T R S R S R S / R D R R R S R S R S R S K R G R S V S K E K R S P E H R S K R R K R K R S S R D N R K T V P A R S R T P S R R S R S T P S R R R R S S V G R K S F S I S P R S R S R T P S R R S R T P S R S R T P S R S R T P S R S R R T P S R S R T P S R R S R S V R R S S F S I S P V L R G R K T P L R R P S R S P T R R K R S S E S R S R S P R K I T O L A Q L L I A K A N A A A C A T A G V P L P N L K P A P P T I E K V A K S G G A T E S L E T K C K Q I A G S E D D D V T V N K P H V S D E E E E P P Y H H P K I S E K P I F F H A I A A K P T P P K S Q V T L K K F P V S S G S Q H R K E A D S V Y G E W P V E N G E N K D D N V F S S N L P S E P V D I T A M S E R A L A Q K R L E N A F U L E A M C M L N R A Q R I D A N A Q I N S I P Q G T G T G V Q V L T Q E L A N T A G A Q A N I K K D Q L R A A P V T G M G A V L M R K M G W R S E G L G K N K E N K S I L V D P K T D R K G L V A G H R A Q K R S O N F S A M K D L S G G H P S A L M E I C N K R R W Q P F L L V H D S G P D H R K H F L P R V L I N G S A Y P C I M P T A R Y
5783	1693	698	D S G L R V A F T M E G I S N F T P S K I S E K K S V L C S T P T I N I P A S P M Q K G F O A V W V Y L M R S P F G L S E S P W A V K K I N P I C N D I Y R S V Y Q K R M D A K I L S I H H P M V G R A P F A N P D S L C L A M E Y G E K R L N D L I E E / P I * S Q / P K I L F Q Q P / L I L V A L N A R G L K Y L H Q E K I L



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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted and nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *Stop Codon, /possible nucleotide deletion, \possible nucleotide insertion)
5784	2669	1388	LHGDISSNVVIGDFTETTKCDVGVSLPDENNITVDEACYI GTEPWKPKRAVERNGVITDKADIFAPGLTLMWNTLSIPHINLS NDDDDDKDTFDESDFDEAYALGTRPPINMEELDESQYKIE LFSVCTNEDPKDRPSAAHIVEALSTCV PRVRPRVTRDHNYYISRTYGPSPDSASRDLVWIDQNEKDKVKIH GILSNTHRQAARVNLSPDFPFYGHPLREITVATGGPIYTGVEVH RMLTATQYIAPLMANFDPVSVRNSTVRYPDNGTALVQNDHVL QDNYNLGSFTPQATLLMDGRIIPGYKEIPVLVTQISSTNHPVKV GLSDAFVVVHRIQIQIPVNRRTIYEHVRELQMSKITNISAVEN TFLPCLQPNRQGVSSQIGPNCWSCSKLQKQSSGPDHRQDW VDSGCPESSEKMCENTEPVET\PLEPQ*ERQPPSSGS*LPP E/DVATSQPPTSLPTEDDTKILALDKDNGASTDSAEKKGGLT HAGLIVGILLVLIVATAILVTVVHNPPTSASIPFIRARPSR WPMKFRGSGHPAYAEVPEVGEKEGPIVSEQC
5785	2669	1388	PRVRPRVTRDHNYYISRTYGPSPDSASRDLVWIDQNEKDKVKIH GILSNTHRQAARVNLSPDFPFYGHPLREITVATGGPIYTGVEVH RMLTATQYIAPLMANFDPVSVRNSTVRYPDNGTALVQNDHVL QDNYNLGSFTPQATLLMDGRIIPGYKEIPVLVTQISSTNHPVKV GLSDAFVVVHRIQIQIPVNRRTIYEHVRELQMSKITNISAVEN TFLPCLQPNRQGVSSQIGPNCWSCSKLQKQSSGPDHRQDW VDSGCPESSEKMCENTEPVET\PLEPQ*ERQPPSSGS*LPP E/DVATSQPPTSLPTEDDTKILALDKDNGASTDSAEKKGGLT HAGLIVGILLVLIVATAILVTVVHNPPTSASIPFIRARPSR WPMKFRGSGHPAYAEVPEVGEKEGPIVSEQC
5786	2532	1674	SYLPAERASSCSOPPTTTRHWPAGRTSKHHRPNSGPT APRPPARSTVSPASPLPKPRAGRCGRSPRSACSTFRPC*SN*X S*H*KNLSORSSMSRPLSCARPIR*ROGLTVAARLPITWAK SPPLACSCQAQKQSSQLSSGRSTR*PERMSRPA*SPPGNPAIP SLAPSSRP/PKGRPOCTWIPSPWAPSTAPPTT*APTSSPGST GRSMNTCPIRTWATPKSARSSRPNNPWP*WRPSGRISTV*RA TGGSTATAPPRFPRNWNHMAE
5787	2	1460	MASAAVTSLADVENCP\TQSTLEKAGSSLSNG/HNNPCRACT T\RYCEIP/GPD\LESP/TC/LCKEPPFP/GSFRPNWLANV VENIRKLQVSLTGLGREDVQGEHGEKIFYPCEDCEMQLCVVCR EAGEHATINRPLEDRAADYREQIHKCLCLIKRREIQELQES RENKRNWVLLTQVSTKROQVSEFPAWFLBECQSLLAQLES QODDILQQRDEPDLLVAGEICRPSALIEELEKKNRPARBLLTD IRSTLRCTETKCRKPVAVSPELGQRIRDPQCALPLQREKXMP LEKLCEFYDEPNHISLDPTSHKLLLGEDICRAQPSYKQNS PDNPQRDPDRATCVLNTGITQGRHTWVVSIDLHGGSCTVGVVS EDVQRKEFLRLPKQGVWAVRLAWGPFYALGSP/TRLTLKEQP RQVRVSLDYEGVWTFINAVTRFPIYTFASFTKRVIPFPGLANG RGSSFSLSS
5788	2	6860	ZHSVORSAYODATABGHFAPGVSVSSTGALSTTTGHCQGGG SEBGGEGSTEGDVTSHNRLHMVRLMLKLLQLTLPLQLRNVGGVR AIFPMOVILMLTDLGDREKDKKALDNLQLIAELGMDKEDV SKNREASALNEVHLVWRLKLVSPMRKSKGSKSS*CESSSILSS ATPALLSSGVYCLHVLKSLLRKYSQNDREPVATSOILKP HTTSSPDMSPFLQVYVGHADVPFATGLLEWELPYOIT KKTITDTSNRIPPPVFDHNSKYFLSEYLMIOQTFFVBRQKLL FICSKKKYQRLDLHLTDS\HVRGICKLLEBQGIPLASVVT SPQALQYDITLISLMEHLKACARIAQRTINWQKFCIKDSVLY FLIQVSPLVDKVSVPVLQILSCALCGSKVLRAAASSGSSAS SSPAPVAASSGQATTQSKSTKSKKEKEKEKDGSTSGSQEDQ LCTALVNOINKFADKETLQIFLRCPLLESNSSSRNQACHLTILH LYRNSKSQOELLDLDMNSINWELPAYGRKAQFVLLGYSFLK TPQTEKKLKEYSKAVETLRTQNHILTNHPNSNIYNTLSGLVEF DNYLSSDPLVCNVEPVPPCYIKLSSIKVDTRYTTTQOVWKIL GSHTSKVTYIGDLKRTKRVTLINLYNRTVQPIVJELNKEA RNRHAKKQVLTQCTEVIKDLPLPVSANLHSPDYENYQAS TETLQCPRCASVPAFNVGCGNGSNVYQCKCRSINYEKDFP

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E= Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
			LCNRCGFCYARDFPMLYAKPCCAVDPIENEEDRCKAVSNINTL LDKADRVYHQLMGRHPQLENLCKVNEAAPSPKDDSGSTAGGIS STASVNRYYIQLAQEYCGDCINKSFDLSKI IQKVPASRKELLE YDLCQREAAKTSERTSVQPTFTASQYRALSVLGCGHTSSTKCYG CASAVTEHCITLLRALATNPAIRHLVLSQGLIRELFDYNLRRA AAMREIEVRQLWCLLTRDNPATQCMNDLIIKGVSTALKGHWNP DLASSLQYEMLLLTDSISKEDS CNELRRLRCLSLFLNANIKTP VVENTTLLCLRIQLKLIKPAFTSKKKKDVPEALITVQPVYCN ETHQOQMLKRPASVDMKKCLPTRGIDGNKAPSKSELHR LYLTKYVNRKQFLSRGKRTSPDLLGRHWLAQLTETAT QAARQAACTIVEALATI PSRKQVLDLITSLYDLSEIAGCAAE YLALYQKLI TSAHMKVYLAARGVLVPGNLTKEIARLLALEEA TLSTDLQOQYALKSLTGILSSEFVEVESIKRHFKSLRIVOTVNGY LCLRLVVRQTKLIDETQMLLEHLEDMTGTSETKAFVAVCI ETAKRYNLDYRTPVFIERLCSIIYFEENEVTEFFVTELEKDFQ QEDFLQGRMPNGPYSSNEPGIGPLMRDIKNKIQCDLVALLED DSGMELLVNNKIIISDLPVAVYKVCWCTINEGPMRIVYRMGR LLGADTRHFI ESLSDTTDEEEDVEEVYKAVGVAQCGLESCWLN RLAGIRDFQGRHLLTLLKLLFSYCVKVKVNRQQLVKLEMMTNL VILGTLALALVABQSKDSGRVAVQVLSNHEIQAEPNVPE LESDKNILLTQDQDQVWLLDQINSTVSNPSVLGQLRIIP YLSPGVEKMQILVERFPGYCFDKYDEHSDGDEKFLADCFK IAAGIKVNSHGHQAKDLILKGIOTNALDVMKHHIP/SA RWDADIWKSFCRLPALPFLRLLLGLALQHPTQTLVIGTDSI PNHLKLEQVS/SDEGIGTLAENI/LESLEHEDPVNKKIDAAR RETRASKRRMANAMKQALSTLG/MTTNKGGQVVD/TRLALLEA DWEELIEEP/GLTCCI CREGYKQPTKVLGIYTFTRKVVLOGGV ENKPRETSRATSTVSHFNI VHVC/HILA/AVSLARGREWEESAA LQNAITKCNGLLFPVGHVPSAPATCLARHNTYQECTGOREP TYQLNIDHIDKLLFLRFAMEQSFSADTGGGGRSNIHLIPIYIHT GLVYLTATSTRSRKNNLQQLFQLEPKKRWSEAFVDDGPIYYTF LALLHLPEQWATVVELLRLLVTSARAVAFGQATRLTDKAV KIDAYSRESSLFWALVDTIYNNKVPVSTNTSGNSCLLEYTR HDMPIFYAADKAKTPOEESFMPVETTFSEFLDVAGLSEITDPE SFLKDLLNSVF
5739	1	2407	LPLHVEKIKRFGQPALKNFGKLRSDAGLESEETAMKKGSTLRKQ TEEKKEKKEKPKSKDTEETIEABEERTVFFPAKQVKKKASPSEVDNN SPSKKAKK/KRPSQNDISPKTKSLRKKEPIEKKVVSSTKTK VTNKEEPSKEEIDAPKPKMKKKEKEMNGETREKSPKKNQPFPH 3PDCNPSAASSENSIEIQRI PVQKRG/AFSNFPPISEETIKL LKRGVTEFLFIQAKTFHVEYSGDLIAQARTGTOKTFSFAIPL LEKHLV/ELQCRKKGRAPQVLVLAPTRELANQVSKFSDITKIL SVACFTGTPYSGQPERKNGSIDLVGTGRIKIDHIIQNGKIDLT KLANVVLDEQMLDMSGADQVEILSVAYKKSDNDPQTLLFS ATCPHVVENVAKMKSTYEGVLLGKQVSTNTSGNSCLLEYTR WTRAAVIGDVLIRVYSGHQCRTIIPCBETKKGAQELSQNSAQD AQSLAGDIPQKREITLKGFRNGSPGVLVATNVAAAGLDIPEVD LVIGQSPFKDVESYIHRSGRIGRAGRTGVCICFYQHKREYQLVQ VBQKAGIKFKRIGVPSATEIISKASKCAIRLLDSVPTAISHEK QSAEKLIEEKGAVALAAALAHISGATSDVQRLINSNVGFTVM ILQCSITMPNISYANKLEKQGLGEIDS VKKGMVFLKGLGVCF DVP TASVTEIQEKMIIDSRWQLSVATEQPELEGPREGYGGFRGO REGSRGFRQDKNRRFRGQREGSRGFRGQSGGNGKMSRSQK QKRSFSKAPGO
5790	3786	1585	AKRKRIPQAIARRNNQELKQVDSLSSESQKHALEPNKRQHII QKCIQKQALBRRNNQELKQVDSLSSESQKHALEPNKRQHII KIQOQLQGLAVTSIRREITENGAFTEESSESSESSESQSGGEE DAESESREKKEKNSKHGKSTETYLAVDGTFAQVQVETIYVYQRI LLVIEKKPDGNNIANDAKNGHGLVPRTYLFPYSEEEQSGGSESE GES3DEVAVDETADGAEVK/QRTPHNSAVQKATSEAGI FCLVN HVSFCYLVLMRRNMEVVEDTKGSETGFRRNVQSGRRIPLWVK

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E= Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
			PVLQCIINTVDVLTIMGAIPAGFPRSTLSQLLEBNGPFRANTFLQ PELMPSQLAHDLMNDATBOTIRSRFSRISLILITNSCKMIFLP GMSIQVLSRHVRCLDFGKNKLSNIHTVRATQCFKKPKTWTFSP QVTRILPCLLDGDCFIKRSNASSPQIOLIFELGISYIRNSTGERG ELSCGNVFLKLFDFASGVP IPARTYELFNGGTPEYKQIENDPSI SRRANGSVFYQIMTMRQPLLKRLSLMRGRNVLNLSLPELTI GNKCSIHLLIFYRQILGDVLLKDRMSLOSTDLISHPMIATTFMIL LEQPDMDALRSSWAGQES\TLKRSKR\PKFPLKVPFRLLVYH VGVLLP/LATVTELPFRKASEETARMKVITDFLKQNGQNG GALQALLSPDGVHEPFDLSSEDTYDLOGBNRKAV
5791	3	1636	LRVAEFGTSSR/IGNGLIQPLHAPAPDHGLRGAAPALSVSR GN/GKQL/AMSSQGSDEQIKRENIRSLTWSGVHGFESLPDQVL NRSIQQGFCEFNILCVGETGIGKSTLDTLFTNTNFEDYSSHSFCP NVKLKAQTYELQESNVQLKLTIVNTVGFQDQINKESYQIVDY IDAQFEAYLQELKIKRSLFTYHDSIRHVCLYFISPTGHSKLTL DLTMKNLDSKVYIIPVIKADTVSKTELQFKIKLMS ELVSNQ VQIYQFPTDDDTIAKVNAAMQGLPPAVGSHDEKVGNGQVKA RQYPMGVVQVRNKHCDPVKLEMLICTNMEDLEQTHTRHYEL YRCKLEBNGFTDVGPEKPFVSVQETYEAKRHDFHGERQRKREE MRQMFQVHVKKRAIKABRELQAFELHKLHLQESRMKLEEK RRLLESILAPSKKKTSEIFHSQSPATQSNLKKDKNRKNSQF FVKQKVPKRRESQANTIAKKLEVCDFAVCFITSLFGHQVQ LLIFMKYPOVOGOYISQSE
5792	2263	653	AAAPSPAMWCGVFWVTVHCTNVMYGVVTEPCSGDASCIQPY LARRPKQL/RHSFTTTRSHLGAENIDLVNVEDFDVESKFER TVNVSVPKTRNGTLYAVIFLHAGVLPFHDGQVHLVSPLETT YMPKPEEINLLTGESDTQIQEADKKPTSALEDPVSHNRPLAL NVNADNFVFDGSSLPADVHRVMKIQAGKTVHYLPILFIDQLSN RVEDLKVINRSTTELPLTVSYDKVSLGRLEFVHKMLAVYSLQ FGFSEKDADEVKGFVDTNLYFLALTFVVAAPHLLDFLAFKND ISFWKKKSMIGMSTKAVLWRCFSTVIVFLFLDQSTLLVLVP AGVCAALWVKWYKALNTIPIWGLMPEFGPTYSSESERKTEBY DTQMAYLSYLLVPLCVGAVVSLNLIKYSWYSLNLSFVNGV YARGPLMPLQLPVNYKLKSAVHLPAWKTAKYARTIDDFVAF IITMPTSHRLACFDDVDFVLYLYQRNLYPVDKRVNVEFGESYE EKATRAPHTD
5793	2263	653	AAAPSPAMWCGVFWVTVHCTNVMYGVVTEPCSGDASCIQPY LARRPKQL/RHSFTTTRSHLGAENIDLVNVEDFDVESKFER TVNVSVPKTRNGTLYAVIFLHAGVLPFHDGQVHLVSPLETT YMPKPEEINLLTGESDTQIQEADKKPTSALEDPVSHNRPLAL NVNADNFVFDGSSLPADVHRVMKIQAGKTVHYLPILFIDQLSN RVEDLKVINRSTTELPLTVSYDKVSLGRLEFVHKMLAVYSLQ FGFSEKDADEVKGFVDTNLYFLALTFVVAAPHLLDFLAFKND ISFWKKKSMIGMSTKAVLWRCFSTVIVFLFLDQSTLLVLVP AGVCAALWVKWYKALNTIPIWGLMPEFGPTYSSESERKTEBY DTQMAYLSYLLVPLCVGAVVSLNLIKYSWYSLNLSFVNGV YARGPLMPLQLPVNYKLKSAVHLPAWKTAKYARTIDDFVAF IITMPTSHRLACFDDVDFVLYLYQRNLYPVDKRVNVEFGESYE EKATRAPHTD
5794	1	5016	MGRLSVNLLLLPALLLHREHRSRAAKGSCASSGCKGDCGAV KQKQGRGLPGLQGVIGTFMGOGPBGPGGPGQKGTGEPGLDG TKGTRGPEGASGYPGNGLPGIPGQDGPFGPGIPGNCNTRKRR GPLSPFGLPAGNPGPGLPGMKGDPGRILGHVPMMLKSGRG PFGIPGTFPGPLPGLQGVPGPGPTGPPGPPGPGPPGPGKMGQ GLSPQGPKGDKDQGVSCP PGVPGQAVQVQKQDFATKQEKQKQ RPGQKMPGPGVGEKRGKPGKPGKPGKDGKGEKSGPFPGE PFGILGKQGPVQKGEAGPPGPGPIVITOPGKEGGERYPTGT PQFQREPOKFGPGLPQGPBPGLPVFGQAGGPGPGEKGERKD RPGPQSLPQSGRQDLPQPSGSGSPGQGYNTNIVGECGPG GDQGPPIPGQGPFGIKIGKQKQKQESCLCDIDGYKPGPGCG PPGEIPGPGQKAGKGRGLPGRDGVAGVPGPQGTGILIQQGA

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *-Stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
			GEFGSTYFDLRLKSKDKD\GFPGQFMGEGAGSFRKGDHVLPG PKGSPGSGVLKGERGPPGVGPPGSGDGTGPPGPGPGAGAGIG DKGGAGFRGGPGSPCLPGPKGEPKIVLPFGPAGLGLGSPGPF PGQGGDRGFFGTPGR\PLG\PGKQAVG\QPGIGFPGPPGPKGV DDLPGDMGPPGTGPRFGPNGLPGNPGVQSGQKGEFGVGLPKLGL PGLPGLPGTPEKSSIGTVFGPKKAIATGPFGLQIRGEPPGPG LPSVSGPGVPGIGPPGARGPPGQGGPPGLSGPPGIRGEGFPG FFLGMPGPKKGAGAGLPGITGQSLGPGQGGAGPGIPGPPG SSGEMVMTFPGQSGPGFWGAPGLPGEKGD\HGFPSSSGPRGD PGLAGDKSEVGLNPKFSGHMKVYMSMKKQKGDQKKGIGPIG EKSGRSDGTGTPVPGKQKQAGSPQPGKGDPLSGTPGAPGLF KSGVSGCMGLPGTPGEGVPGIPGPGCSGLFQEGAGKKEKQ AGFPFG\GIPGLRGKSGQDGLAFPGSPGKGEKSGIGIPMGPG PGLKSPGSGVYFGSGPLPGEKDDKGLPGLQIPGVKSEAGLPG TPGPTGPAQSGKRGPSDGLPGSAGEKGEPLDGRGFFPGFGAKG DKSGKGEVGFPGLAGSPGIPGSKGEQGMPPGPGQGLDGLGSP GHVTEGPKSDRGPGQGLPGLPGLPMPGPGPGLGIDGVKEDKGNP GWPGAPGVPGPKDIPGPGMFGIGSGPGITGSGKDNMPPGVGFG QQTGKLPGQLQIGKDGQDQVPGAGKGLPGPPGPPGPGYDIIRGEP GLPGPEGPGGLKGLQGLPGPKSGQGVGTGLVIGPGPIGDFDGA FGQSGEMGAPGTPGFGPGPGPDGLPGSGMPPGTDSVDGFLG VTRHSQTLDDQCPQSTKILHVOYSLLVQGNERRAHQDGLTAG SCLRFKSTMEFLFCNTNNVCNTASENDYSKWLSTPMBWBLAF ITGRENIRPFILSCAVCEADANWVAHVSQTGIPPCPGSSSLH GYSPVMTISAGARSGQALASPGSCLESFRAPAFIECHGRTCN TYANAYSFWLATIERSEMFKPTPSTGLKAGELRTVHRCQVCMR RT
5795	1192	61	STRSPSTVEYLSANPHILFEMLLKGYEARQIALROGIMLRRCIRRE PLAKILFSGNFRDFFKYVSLSTFDIASAFATFKDILLRHKVL VADFLBNQYDTIFEDYSKLLQSNVYTKRQSLILGELLLOREN FAINTKYISKPNLKMNNLLRDKSPNIGPEAPHVFEVVASPH KTOPIVEILLKNQPKLIBELSSPKQKRTDDQPADEKNVLLKQI RELKTPAP*RALRDKR
5796	2	1078	GRVGNELGCTISPKPKRWMDAGDPSLFIPTAMIGCSFVWNRKF PRLGILLDPMQDVGSENLGLIKWLCQSGNVLFGSPVRAHIE RKKKPYNSNIGFYTERNALRVAEVDVYSHVITAMNLLKXP GIDIGDVSERRALRKSLECKNFQWYLDHYVPEMRYNNTVAOYE LENNAKADVCLDQPLENHTIALYVCHWGPQIARYTEGFLHL GALGTTTTLLDTRCLVDNSKSLRFLQLLDCVKSSLYKRWNFIO NGAIMNKGTGRCLVENRGLAGIDLERSCTGQRWITKISIK* R BGAGALEPGPQDMAAPPNIWTSFCPGGTARGRQVLDDPFRASFG QHRDGG
5797	2	891	FRVRQRTLVDTVLENSNIKDQNTNQQTYEASMKIRKQKQLE VAQVENQLLKMKESSQANARVNRMTKLYSQYEEKLQREQR KHAASKAALLBETNSPLKATBRANKKQAAZISLEREQDRIQSEL DRLTEMBKREHQLQALLERHSTMSGELTDSKERYQLLEBAS ASLREIRRLNDMVMQCKKVKQWFBESIKKLLKQQLLILQ LLEKISFLKGNWELQSLDYLETQAKVTEFRIGVGCNILLP SQTRTEIIVMPSRNYTPYTRVLELTWKHTLT
5798	644	115	KILGSRNKKEMSNQKQEPYYESCARLSKTHLKYNNYKYPKPER TCIVDGGKLRIGSYKOLNRSRQREMGFTVGGQGPQIPITTTGTV VVYPGAIATWATTPSPQMTSDCSSTASPRESLPVIGSTYGMKT DQGLAGNEMINGEDENEMYDDYRDDP*XSYSSENTEAPEVAN
5799	2679	1435	LLSTYIKFINFLFPETKATIGVLRAGSQLRNADVELQQRVAYEL TLSSVASTDVLATVLEEMPPFPERESSILAKLKKKXGPGAGSAL DDGRDPSSNDINGCMBSPTSTVSPSADLILRAAPPAPPA PASAGAGNLLVDVFGPAAQPSLGPTPEAFSLPGPRDIDGPIIP KADSLNKKFVCINNVLFFENQILQIGVKSEFRQNLGRMYLFFYN ICSVQFGNSPTVYVHMGDLCTLAVQTKRVASQVLDGQACQVQL NIKCLARDPLTPPLLVSRFYGGAPQALTKLPLVTINRFPQTEM ANQDFGRWKQLSLPQCEAQKIFONHFWDAVTKKLLFGGSA

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *Stop Codon, /possible nucleotide deletion, \possible nucleotide insertion)
			LMMELRPLLKVKIACGLKSDRFKSTYAAIYPPFIDTLQAVGGGLLYYAFPPYIILVLSLVTIAYVMSASEIENCYDLIVRKKRLIVLFSHMLLHAYGIISIRVDKLEQDPLLALVPTPALFYLTAKTTEPSRILSEGGANG
5808	2	433	SLPDSGVVEYLSNGOVAONKDFGELRYNECLMNFSCNGKNGSS EGRITHGFLKSAYENNLMPYTNITDFDKGVIDYIYFSKTHNVLGVIGPLDPQMLVENNITGCPHPHIPSDFSLTLQELHPLPLP LVNGVHLNRR
5809	464	2422	ILVFGQGIILHPOVICALQSQHQAOELVADICEVSGLCREGGRCVNIHGSFRCICMDGYLPRNGPEFPFHTDTATSCIEDOGTFPEVDCTIIGNYISLGSQVRIACREGFSPVFDVSSCTGLGATWESPRLHQCQINCGPPEMRILYVNHSSLGQVARYCYCGEFTSPGKITSVCTEGTWRSTLACIELYKINDVSLNDTTCRWQINSRRINPKISVISIKGRLODMESVREETNLTDSTREPEVCLALYPGNTYVNIATAPPRSRMPAVIGFQTAEVDLLEDGGSTNISFNETCLKNRRSRKVGSEMYQFTVLQQRWYLANFSAISFNFTTREQVPVCLDLYPTDYTVNVLTLRSKRXSVQITATTPAVKQITISNIGSPNETCLRWSIKTADMEENYLFHWGQRWYQKEFAQEMTFNISSSSRDPVCLDLRPGTINYVSLKALSSLPVVISLTQITQIEPPLPEVEFFTVHROGLPRLRLFAKENGKIPISISYQVILPLALQSTFFSCDSEGAASSFFSIASDADGYVAELLAKDVDDPMETPIQRHLIIGETYNAPLARGSDYICILRTISENNVRHRSCAVNAQVDSLSMLLQAGVQGLSIAVILITPLTFSNV
5810	3	1641	KYRGTAKHSEYSTLPAISAVKQLASPLENIEKSLKEAFVSEIESPFTIIEENCKMKRLEEQNEBMMKVLAQYDEKAQSTPEVKKKMEPLHEQWVFLQSMETAQDTLETIVRESELDEAVELTFSEELINERLLSAMESTASLEKMPAASLSEHYDDSSARSQDQMLQVAVPOPPRLPEOEPNSATSTTIAVYMSMKKEDVIDSFQVYQMEQVODDOVNLVEEYRLTVKESYCI FPDLEPDRCYQVMMVAVNFTGCSLPSERAIPTAPSTPVIRAECDTCVNTATIRWRPTPEATETTYTLEYCRQHSPEGEGLRSFSQIKGLQKVNLPQNDNYFFVYRAINATGTSEQSEALISTRGTFLLRETAHPALHISSSGTVISFJRRRLRLETESVLGEELPSCQGVNETHTVDCPAYRLGICSSSAVQAGALQGGSTSWYHMCSEFORITFFYSGIVSVDVHVTERRPARGILLDYNQRLLPTKASEQQLFIIRRRNEG/HAPAFLEKPGKCTLHGTPEPDSVRHK
5811	1918	851	AAALADPLPEDKWSAEKPEPLKSLGTYETFLANLPFRKSHDHYWDRIGAVREYVQPPNALGAAGNFVSDQILVYAMIGVNPFRDSSASSYVLDHMSLPHVINPVESRLGSSAASLYPLNLTLYVPELASHPLYIQDKDGAFAVINAPHSPRWGIMVNVDSKTYNASVLVPRVSVDMVRVMEVFLAQLRELLFGIAQPLPKCLLSOPTSEGLMTWELDRLLWARSVENLATATTTLSLAQLGKISINIVIKDDVASEVYKAVAAVOKSABEILASGHLSAPVASQEAVTSSSLAFDPDLSLLHLLYFPDDQKFAIYIPLFLPMANVPLLSLVKIFLETIRKSNRKPDEKTD
5812	8204	2744	QGRQRQGRGSRGAREBEVEPQTAFFPFAASAMDALEKIAIDPTLADQKNIKKAAYMLDSQRRTSEENKRLISGDPFGLQDSQQDMVSTIQVQNIAMGDEDEPQSHRQNTICECHWALLQHSLEGAYSTILDEKXRLITRILSDTILWLCRIFRYANGCAVETIEEREGLAKICRIASHRYDEVFVDDGNVLNKKPVLYLSAARPELQGYLCNQLGLPFPCLCRVPCNTVKGSHQMDVAFLEKIKDDTERSLPLLLVANAGTAAGVHTDKIGRLKELCEQYINLHVSGNLATLALGVSSSVLIAAKCDNMTWPGPWLGLPAPVNTLYKHDDPALTLVAGLTSNKPTDKLRLPLALSQYLGLDGFVERIKHACOLSQRIQESLKKVNYIKLVEDELSPPVVVFRPEQLPGSDVPFKAVPVPNMTPSGVGRKHSKDALNKLNGEOLKOLVFASGLTVMDLEAEGTCLRFSPLMATAVLGTRESDVQLVACIRSLPVLCTQLRLREFKQEVKATAGLYVDDPNWSGIGVVRYEHANDKSSLSKSYFQGENIHAGLLKLELESDPTFKIGPEYKSMKSLCYKASNDVHAAELVETLAATARELEKNSRLLENTVEVAKIQEAQVHQLGASERLLKEGVLRQIPVVGSVLNNFSPVALQKGRTNLTAGLES

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, * =Stop Codon, / =possible nucleotide deletion, \ =possible nucleotide insertion)
5813	2936	699	<p>TRPTVYVKAQAGVTLFFTPSGSRTKQRLPGQKPKRSLRSDA LSKTSVSHSIDLEKVERLSGGPQITLEASTTGHFGAPSPQH TDQTEAFQKGVPHPHDDHSQVEGPESLR</p> <p>HRDGVSGSLRPLTDESRTGAPAQQRGNATAGSGGADGSRG LIRLLSFCVLLAGLCRGNVSERKIYIPLNKTAPCVRLNATHQI GCQSSISGDTGVIVHVEKSEDLVOLWLTGPNPPYVLLSEKHFT RDLMEKLGRTSRIGLAVSITKPSASGFSFSPVCNDGFGVY SNSYGFPAHCREIQMNSLGNGLAYDFSPFIPLLEDENETKVI QEQDQHLLQWSSAFTPICAMQLFSHMWLSFSTAT\CMRRS SIQSTFSINKEIVCDPLSDINWWSNLKRIINTTGLAPDRKRVVA ATRLDSRFFWNVAFGASBVAASFPTLAAALQAFQVTVTL PRNVNVPFQGSFTDYIGSSRMVMDKXGKFPVOLNVDSPVEL GQVALRSTLELNMHTDPVQSKIESVANGVEDLLALEKSGAGVP AVILRPNQSQPLPSSILQRLRARNISGVVLACHSGAPHNKY OSIYDTAENINVSYPWLEPLKE/ETNNFG*QDTAKALADVATY LGRALYELAGOTNFSDTVQADPTVTRLLYG\FLIKANNSNFGS ILQGRDLRSYLQ*ROLGH\YIAV\SSPTINTIYV\VLQYALANL TGTVNLIREQCQDPSKVPSENKDLXEYSWVQGLHNSNETDRLE RCVRSSTARLALASAFELQWSSSTYVTTSESRNKDITARIPL IASKELELITLVGFGILIFSLITVTCINAKADVLTAIPREPQA VSY</p>
5814	8500	432	<p>ALKCRPRNVLLAIIGFPGPDRNAGDAVAVCVYRPLNRSRESL GETAQVYKTKNNVIYPPDQSGSPNFDVLAHNETKKNVTEA\I APAPIIDSAIQGYNGTIFPA\YQGTVASGHTYTWGSEDELQVLI QGFHGFHSQKI*EVLDFREFLRVSYMEIYNETITDLLCGTQK KPLIIRREDVNRNVVADLTEEVVYTEMALKWITKREKSPHYGE TKMNQRSSRSHTIFMILLESREKGEPSNCEGSKVSHLNLVDLA GSRBAAQTAAGVRLKGCQGNINRSLFLGQVIKKISDQVGGFT NYRDSKLTIRLQNSLGQNPKTIRIICTITPVSPDELTALQFAS TKYMKHTPYVNEVSTDEALLKRYKEMDLKQKLEVSLETRAQ AMEKDQLAQLLEKDLKQVQNEKIENLTMVLTVSSSLTQGEI KARKKERVYVCLGKINMKHMSYADQFNIPNTITKTKRLSINL LEDESVCSSESDVSTENTLTLSELENPACTKALLQENIBSEN SLRADYMAHLDYEQARTKEEMELKLEKNDLSEFALKREKTK KDQBMQLIHEISNLKLVHIREVYQDLENTESSVLEKREKED QIKKLEQYIDSQLENTKMDLSYSLESIKDPKMKOTLYDAEYV ALDAKRESAPLRSNLKLEKMKELATTYKQEMNDIOLVQSOLE AKKMQVDLEKELQSAFNEITKLTSLIDGVKPDLLCNLELGK ITDLQELNKKVRENRAIRRVILLSEKLSLESEVERLRKEIQD KSEELHIIITSEKDLFSEVHHKSRVQGLLEIGIKTKDOLATQ SNYKSTDQSPQNFVTLHMDFEQKYVNLNERNMQEIVNLSKE AQKFDSSLGALKTSLYSKTOLQERTREVQERLNEMBOKQKLE NRDPSLQTVREKTLITKELQOTLEEVKTLTQEKDOLKOLORS QSEKDLKSDIHDTVMNNIDTQQLRKALESIKHQHSTINTLES KISEVSRNLNHEBNIBETKDEPQKRWGIDKQOLSAKNTQTLL TADVYNNITQEQRIKPSLQRYNMQSQVQAMQVLEKQKTKDL KENLMTINQERLELLGDELKQEQIVAQEKHNAIKKESGLR TCRRLAVREKLEKKSQQLKEKQQLNVQREMSBQKKNIEIE NLKKNLKNKKLTLEHMETERLELAQKNENYERVSTKTKRVY KELQKSPETERDHLRGYIREIETGLQTKKEIKIAHILKEHQB TIDELRRSVSEKTAQIINTQDLKSHTKLQBSIPVLEHEQELL NVYKVSQETQETMNELELLTBOSTTKDSTTLARIEMERLRNRP QESQREIKSLTKERNDLKTIKRALEVKHDLKHEIRETLAKIQE SQSKQKQSLNMKKEKNETIKVISEMEQFPKEDGALLRIEMIGL LSKRIQESHDEMSVAEKDDLQRIQEVLESQESDQLEKNIKIV AKHLETEELKVAHCKLEKQSBTINERLVNLSKRETSITQIKQ LSAINDLQNKIQEITYEKEBQMLIKOLISVQEKVNLKQKFEHR WAKDSQSLBSQMLERLRLQESQSBTINERLVNLSKRETVQRA LOERDQKKEKTEIVAKMKSESQKQFQKQVAVHETSEVQED LHKKQPFQTKQKNIHETENIRITQIHNENREMSVSTKED DLRSVERTLKVKDKQLKRNLEKTIITDLEKQERLKIWHMHLKEH</p>

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			<p>QETIDKIRGIVSEKTNISNNQKDLHESNDALKAADLKTQBELR IAHMHLEKQURTIDKLRGIVSEKTDKLSNMQKDLNSNAKLQEK IQTLKANEHQLTITLKKDVNETQKKVSEMEQLKKQIKDQSLTSLK LBIRNLMAQKLLENLEEMKSVMKERDNLRRVEETLKLDRDQLK BSLQETKARDLBIQQLKLTARMLSKBEKETVDKLRKIKSEKTIQ ISDIQRDLQSKSTELQKKIQSLQKQELQLLRVKEDVNMHSKKIN EMEQLKQKQEPFNLYLCKEMDNFOLTKKLHESLEIRIVAKERDR LRRIKESLRMRDQFATLREMIARDQNHQVYKFEKRLSDGQQ HMLSLAEKCKRIKELLKRYSEMDHYECNRLSLDLKXETIEFH RIMKKLYVLSYVTKIKERQECINTFMDPIEDVEKQELLIK IOHLQDCDVPSEBLRDIKLNKNMDIATREIKDFSESSEPEIIX TEFQQVLNRRKEMTOFLEENLTFPIEKIKKNGIQKENDRICQV NNFPNNRIIAIMNESTEFERSACTISKWEQDLKSKKKNKELP KNYQTLKTSLAGAQVNPTTQCNKNPHVTSRATQLTTEKIRELE NSLHRAKESAMHKSKEIKCKELEVTNDIIEAKLQAKVHESNKC LEKTKETIOVLQDKVALGAPYKEIEIDLKWLAKTIDLEKMONA KEPEKEISATKATVEYQKVIKRLLENRRSQDQTSVISEHT DQPSNKPFLTGGGGSVYQNTKALILKSEHILEKEISKLKQON BQLIKQNEILLSNMQLHSENEVKTWERTLKRAHQVTCENSPK SEKVTASAKKQITPSQCKERNLQDPVPKESPCFCDRSKSKS LESPEHVPYFDMSSGLCPEVNMAGASSVDSQPAPWALRQKQ DVPDECKTQ</p>
5815	23	1460	<p>SELVNTVONRESLGLLSPFNITVWCCASITNEPSNKSVPKET VDRLLKGYDIELRDPFGGPPVDVQGNIDVASIDNUSEVMDYTL TMYFQSNKDKRLSYSGIPMLTLNRRVADQLVMDPTVFLNKK SPVHGVTVMIRIEMLEPDTGLVGLRITTATACMDLRYPLDE QNTCLIESYGYTDDIEFYNNKGGAATGVNKLPLQPSIVDY KMSKVKVEPTTGAYPRLSISFLKRNIGYFILTQYMPSTLITL SWSPFNINDASARVALGITTITLMTTISTHURETLKPIYVK AIDYLMGCFVFVFLALLEYAFVNYIFFPGQGQKQKASQKQDQA NEKKNEMNKVQVDAHNGNLLSTLEIRNTEGSEVITSVSDPKA TMYSDASIQKRLSRRE\A\CRAPDRHGVPSKRIKRRAS\A QLKVKIPDLTWNISIDKMSRMPFITELFNVWLYVH ISRSRAAAQEDAPTFGSVEGRORRAAGEDNSAQAGQSPFP TVYHERQRLCAVHALNNVLOQLPSCQEAADRIKRLAPPDRIL NPHRSLLGTGNYDVNIMAAQLGLGLAAVMDRRRLPLQALPQ VLGLILNLPSPVSLGLSLPLRRRLHMPCARL/VTVSYNLDLS KVLRAPEGGGLRTE\*GPFLAALAAQGLCEVLLVVTKEVEBK SWLRTD</p>
5817	851	118	<p>RLRFGPGANRGSCRCSCGOREPSGGLPKRIHFCP\*PSPFAAD VMSNT\*VPNAPQANSDSMGVGLYGPFLITLVGVVAVVMYVQK KKRVDRLEHLLHLMYSYDPABELHEAQELSDMGDPKV\QAG KVATSTSGCHCMNSRRDLTFLPDPSEPGVLDCIGPCHLLPLLS GSPCWLVLGLHISHPFSAASASHALITLSLPGGLVSPVGEILTA HPCQKACGPFSGNAGRHLCIL</p>
5818	3	3918	<p>QATDELTETVQSPFAVIRHESKMLSDQDQQAQAAAPKQED DRLKGPPISSSQQRKQVSDSDGIKIKSNRKNKKCSVLST KKMKKSDGLGASGHSSSTNNSINKTLQDDVKEKDGTKIASIKI TKELKTGGKNSVGKPKTVTKSEITENGDKARLENMSPROVVERSA TAAAAATGQKNLLNGKGVNRQEGQISGARPKVLTGNLVQAKAK PLKAGATGKDSFCLSIAGPSSRTDSSMEFSTIECLDEPKENG TEEEKPSGHLKSPCDSPQGMKNSVDSVKNSTVAIKSRPVSRT NFTSNKKSIRQDINVNSVLEKVGSGCSEVPVQAILKRGTS NGCTAAQORTKSTPSNLTKTQSGQSSPNSVKSVSRRSQSDENV AKLDEHTTTEKQAPKRMVQVHTALPKVNAKIVAMPKNLNQSK KGTELNNKDSKQKMPGGQVISTKQPSQRPLEKHTSTVQKSMFH VDRINDKDSKVSCKPHKPLNLASEISDAEAGSSCRP\DPQK FLANDQREKALBECQNTSKLDSKSHESKQCLCLDSKSTFTFN HKSTDCCDAANIICHSVSDSNVNSKPTSTLKYMSNENENEL NSNPVCLDSTSGAQHILTSDRNGQVRKDTNKQSSIKCVSDVS LCNPKNTKGTLSAQKDKSKSVVGGITTPKCSDESAMDEHSH</p>



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			<p>ATATGSDVSSKCFSGQLSEKNSPKNMTSESPESHRTTETFPVGH            WNI/STGVLMHQRESPESDTGSATTTSSDICKPSESDYDAGGSDDD            GSNDRGLSKCOTMLCHDFLGRSSSDTSTPEELKIYDNLRIEVK            MKQSQSNDLQVQNSTDDDEIPRKRPRPINSRSLVHSRERENIPR            GSVQFAGELDQVSSSADETEDRERSEAEVVAENFSISNPAQQFPQ            GLINLAFEDATENCKRFSANKKFKRSVLLSVCEELGSDDEGE            VYVPPQASVDSFESDVGFGSHHSGRTCTSRFSRESDNILLE            CKQNKNSVCNKNESTVLDSSIDSSRKNKQVASTENKNTIDVL            SRSRQLLEDEKKNVNGENVENDIQQRKFLDSVKSQRPCHL            DLHQRPNMSDIPKNSSTKSLDSFRQVT.PQRSPVKRSKSTTTK            ANIALSAGDIDDCTLAQTRMYHRPSKTLSPYEMDVIEAPFQ            KVESETHVTDMDF*DDQHFQAKQDWTLLKQLLSQDSNLDVNSV            PEDLSLAQYLVINQTLILLARDSKPGQITHIDTINRNSELTSPLD            SSASITGASFSSSDCS PQGEWTILELETOH</p>
5819	1	5557	<p>AAAGLGLALHMLVTLVVAARAKRAVQSESTIEVLRFDDGGI            LQTEVTLLGLSSVQKKSISLYRGNCRPIRFRPMLDFHQVPGMP            KNEKVYLHNSPSE*TIITLVSIPATTSHFHASFQNRKLLPGCNT            SFDVS/VFLARVGVNVENTLFINSHGVFTY\OVEGVGVNPFY            RLRPFGLARVTVNNSFSPININHPHSEFELQVEMYSSGGDIHL            ELTPQOQGTGLKWEIPPYETKGMVHASFNSREANHTAFIRIK            TNASDSTETIILPVVGVVYTAQDLYSYSTHMLDFTLRQDLKPV            INAKLINSOTKNDVPIITSVAPTPQ\NDATVHKEFTLLASV\SEK            YTKVASISFDASKAKKPSQPSGKITVKAKEKSYKLEIPYQABV            LDGVLGPDHAAATLFIIRDSPADPVERPIYLNTFSPAILIHDVL            LPEEAKTMFKVHNSKPVLLIPNESGYITFLFMPSTSSMHIDN            NILLITNASKFPLPVRYVTGPIDYFVLPPIKEERFDFGVLGAT            EASNLIFALINSNPIELAKSWHIIGDG\LSLELVADVRNDRTT            ITSSLPCEKSSSSSDQSVTLASGYF\AVFRVELTAKKI\BOIH            DGAIGITTDYIEILTIPIVK\AVIAGSLTCSFHVVLPPSPFGKI            VHQSILNIMNSFSQKVKIQQIRLSIEDRVFYKRLRGNKDELPD            KSKILANIYFDPLGLQGDHCYVGLPFLSKSEKPVQGVAMQEDM            WCADWDLKSLFKFGWQCIKENSGRHLSAIEFVNTDLQNIISKI            TABLSWPSILSSPHRLKPLITNCKNS\BSEITLNF/SGQVFPV            YVQFIPALYSIPSVFVKDLVSRPESLGVAKDLATLAFVFRN            SANPLQSSGTMGEG\LSPHILINLILKPKGEKSKYK\FTFPHN            RIVSLLIIVRNH\TVMDAVMVOOQGTENLRVAKLPPGSSLR            PKITEALLKDOCTDSLKLREPNFTI.KRTFKVENTQOI.QHIHTE            IGGYSCROYGFKVNCQEFTL.SANASRDIIILFTPDFTASRVIR            ELKFITTSGSRFVFIILNASLPYHMLATCAEALFPNPNELALYII            ISGINALSLLVIGTA\YLEAQGIWEP\FRRRLS\FEASNPFPD            VGRPFDLRRIVGISSEGNLNTLS.CDPGHSRGPCAGGSSSRFSA            GSHQ\GPSGHFSSHSNNSADVDVRYNRSR.TSMTGAQAA            SSQFANKTRPLVLDNSTGAQHSAGRSKGAKQSQHSQHSAH            PLEQHPQPLPPVPVQGPQEPQERLSPALAPSPHFRASASAH            SSSSDITSILIRAMDQPDHRSFALVEFTTEPPSPFLKSKGKG            KPLQKRVKPKQKEKSKKPKQDELCDLADDESSITTE            TSNPOTED.LIKEDYKQKQKQMDKESBEMQVQKSKKLI            KKEIPTDVKSSLELFTYPPLESQRNRLPKIPLPTAMTSGSK            SRNAQTKQKSLVNRPALAKPLFNSQGLNTSSSEGEKDSF            PPMDSVPVHPKGSSTDSLVLKSLQTLNADIFLKRQRTSPPTAS            PSPPAAPCFPVARGSYSSIVNSSSSSDPKIKCPNGSKHILTKAA            SLPGKKGNTFAAVTAYDKSPGNGFAKVSINKTGFSSSLGIS            HAPVDSGSDSGSLWSPVSNPSPDPTFINS*SAFGNSFNLTGE            VFSKILGSRSCNQASQRWNENFNSQGLWSPATDPSPSPWAS            SGPSTHTATSVLQNTSGLWSTTPFSSINSSNLSALPFTTFAN            TLASIGLMTYNSFAPHA PSTSSPADDI.GQTGNPWKNSPTTIGR            RSSDPWNSHFPHEN</p>
5820	310	1270	<p>RVLSGQSVSLGVLICARSSSTMGRDNRAVAYMNPIMASRESGPIQ            SSGPTIQV\I*IDQGLPGKK*KSN*KRKRK/DSKALAEFEKMN            ENWKELKHKRELLSGSSSSSKKQKQKKEKKSW*\DSSS\*            SSSSSSSSSSDSEDKQCKRKKKKKNSHSSSSSGMETS</p>

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5821	179	915	DSKSLKKKKKKSDTTEKEDIKGLTKRHHYSDDKPLSGSELS ESEYIEVRAKKKKSSEREKATKTKKKKKKKKKKKKKAA SSSPDSF*H*EKSFFPYKESAMSEISITVKTITLLKCNPLFV GIIPGLFSHSDATV
5822	464	4379	KWRNQSRRWPKPGTNNMLSCSVCRVRVWIGSVWKKLGHHPOT PT/IKDCSIAATGKRPSARFPHQRRKKRRMDDGLABGGPQRSN TVYIKLFDRSDVLAQPSSENTILYPICRAWNNSPFVRRECSPS SPLPPLPEDEG\SEVTNSKSR*CVQACFPHTTGGQPKACR\ SRIPSLAALRNQGT*RWSPFEPSPSTLIYRNQWRKRIQ RWKASHRNQRLYSSEMKILRENYEQ JLLEHFIWVARDLEKATSSSEDSSEVISQEDHCIMWGGCRRI PVVFIADAILTKNNRIVIGRHLSYKIVKTSRSLRVSLITA HQPHEVHPSSTDTYLMWTSGLKFLRLTLESAQVWPPFRFSYE LTKRDLKYLITRMQITGKFAKILFLOTPLFAEYKQVSNYS KDRGPWIKPVASSRRGG\VYLINNNQGISLEENILVSRYNNP LLDIDKFDFVLYLVLTSDYPLVLYVEGLARFATVRYDQAK NIRNQPMHLINYSVNKSGDYVSDDPEVEDYGNKNMSGAMLYR LKQEDRTTALMAHVEDLIITKIIAELAIATACTFTVPHRSSC FELYGDFVLIDST_KFWLLEVNLSPSLACTADLKLKASMISD MPTVGVFVQDPAQRASTRPIYPTFESSRRNFPQKQRCRPLSA SDARMNLVGSAREKQFGKLGSGVLGSMEEIKVLRVRKEZENDR RGGRHIFIPFSTHWEIYSGYLHRTKSNMYLALRIFQDRMTADG APELK*SLNGSKLHAADYEEKLLSLEVRKKRRSSRLRAMRP KVPITQDAMMYVITESESEERVALNDEEQASCEESAGF LREMQXYPTSPITALVENTPKSNMVLWNNKGGCCLETOB DEKPHFLMQLQNGKGLSEMQARAFASVYLHQVQILRMKDSGG QTFASAAAKEDQEMLVVRFLKASNNLQSHLMVLPERRLAL LERTRILAHQLGDFIIVYNNKTRQMAKKSKKKVEEEDGVNM ENQPFTRQASAELELVITFYTQNTKSASVGLGTHSKISKNN NYSDSGAQGDHPETIMEEVKIKPKQQQTTTIEHSDKSRFTTSA EKEAKLVYNSSSOPTATLQKIPNTHLSVTTSDLSGPGCHSS LSQIPSAIPSPHQPOTILLNTVSASACPLHPGAQNTPSPTGLP RCRSGSHTIGPSSPQSAHIYSQKLSRPSAKAGSCYLNNKHS GLAKTKBGEASLYSKRYNSMVTAELOIAEKQAARQYSPSS HINLLTQOTNMLATGINSASAPPLRPHISPGQPTWSTO SDQAPENHSSSSPSRSLQSGFAMBSVEYBNYSQATDVPHQ KYHPFASVYQLQALQLOQQLQSRQLLDOSARHQATFSGCT LPNSNLWTNNAGACRISATASGQKPTTLPOKVVPPSSCASL VFKPPFNHEQVLRRTAQKASKSGSAGGQNLQSSNLNPAAPVP TTSSTDPAMTKINHHKTEKQPVHSHVHD
5823	42	2293	LLTALSMEGGGGRDEPSACRAGDVNNDPKEDILLDADEKFFD DLSLSSSSANEDDEVFPGPFGHKERCIAASLENNFVPGQPLP TSSEPFAMSPLAGKEFVYVYKEAHLALHIESSSNNQAQAAP EDRPSQGVETIQESK*KLINLFEKEKEMKSPSLKRTYLLS DSPLIGPPVGEPLLASSPALPSSGAQRLTRADQPPHSAHALP RESCTHAASQAATQRKPGTEKLLPRAASVVRGQTPGAAREKPK ETPAGFSRTKIPARESHRDVLPDPAQAVNVFAGSLGQSK RAIPVPMKLLKLLKAPASVYVYVQSSGA\YVWSGSSA CTPQPVAKAKSSSEFASIPAN*LEGLOPNISKSGWGPAMLRPA LAPGPVG\ASSWQAKRVDSKLAEDQIADPA\SASPTQPTPE GGG\QWNLSSCAMESSQLNKTRSTREDSCLNKTVMPTPTN QFKIKPKFS_GDS\PDSSSTPKLSRAQRQSCSTVGRVTVHSTVVR RSSQFAPQSLLSAWRVSAIPTPASRCGLPPTYETKTRAVAGS PL\CVPARRRSESRKNSAMRTFTRESNRKTDRLVDVSPDR GSPPSRVQAINFSPRESSTFSKSTATEVAREAKPGGDAAPS BALLVDIKLEPLAVTPDAASQPLIDLPIDFCDTPEAHVAVGSR SRPLIDMTNTPDNKNHIVAKSPVVGQILDSSPLIQLSPEADK KNVDSPLKPF
5824	42	2293	LLTALSMEGGGGRDEPSACRAGDVNNDPKEDILLDADEKFFD DLSLSSSSANEDDEVFPGPFGHKERCIAASLENNFVPGQPLP TSSEPFAMSPLAGKEFVYVYKEAHLALHIESSSNNQAQAAP

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			EDPRSQGVRFIQSEKF\KINLFSEKREKIKPSTSLKRTVYLS DSPLLGPPVGEPRLLASSPALPSSGQARLCTRAPGPHSAHALP RESCTMDAASQAATQRKPTICLLFPRAASVVRGIPGAEEKPKK EIPASPRTIKIPAEKESHRLDLPKPAAGAVNVPAGSILGGK RAIPVP\NKLGLKNTLLKAPGSYN\LQKSSSGA\VWSGASSA CTPQPVAKASSEFASIPAN*LPGLCPNISK\GWMGPAMLRPA L\PAFPVG\ASSWQAKRVDVSELAEQLTAPP\ASPTQPTQPE GGG\QWLMSSCWSESSQLNKTSTRIRRDSCLSNKTVMPTPTN QFKIPKPSIGLS\PDSTPKLSRAQRFQSGCTSGVRVTVHSTPVR RSSGPAPQSLLSAMRVSEALTPASRCRGLPMTPTKTMFRAVGS PL\CVPARRESSEPRKSAWKETPTRESNKKTDGR\LDVDSR GSPPSRVQALNFSPEEADSTFSKNTATVAREASQPDAPS EALLVDIKLEIPLAVTPDAASQPLLDLPLIDPCDTPBAIVAGSR SRPLIDLNTNTDNNENAKRPSPVQQLIDLSPLQLSPEADK ENVDSPLLKF
5825	2	4210	FLQIESASPAFPSSQFLAAHPHSFGSGLTAKORSLAPAGMHL SAAPPAPPPEVTATARPCLCSVGRGDDGKMAAGALERSFVEL SGAERERPHRFREFTVCSIGTANAVAGAVKYESAGGFYYVESG KLFSVTRNRFIHWKTSDDTLEMEESLDINLLNATRLKFNCS VLFGVYVSETONRVI LMLTNOCTVHRLLLPHSRMYRSEI\VD SQMSIFTDIGVDFDTPCNYQLPAVPGISPNSTASTANLSSD GEALFALCASKGILV\KLPDPCMVSVVELKQSSVQGRLLT GMWPTATRGQSPSDPLSLAVHVEDEATPLCQDSKRWMS YKQMCLMVAWLMLEYVPVKLDRLTATGTHKILRAVSPHGLYL GIF\HMAPKRGQFCIFQV\STESRYSLDHSISLTLDITD ALISTDINALWHDANQTVVKYINFEENVAGQNVFVYQGLPEE EIVIRDQDPREMYLQSLTFPGQFTNEALCKALQIFCRGTERNL DLGSELKKEVT\AVENELQGSVTEYFSGEERFNLCQEFNCKP YACCLQVQEALSHP\ALHLPNTMVLCLLKGYSFLTPSSIVD HLYLLPYENLLTEDETTISDDVDIARDVICLLKCLRLTESVIV DNSVIMEMSCYNLGSPEKAABQILEDMITIDVENVMEDCSKLG EIRNP\HAI\GLLIREMDYETEVEMEGFNPAPQNLIRNLTQLY 36NTAGYVCRVGHKIPASTHFLICRDLTLQQLMKRGDAVING TOOLFQAQDPLHRTAPALLSYLKNQSECLATVPLDTLESN LQHLVLEILDSGAIANRFPVSSPTIVELFPQARKHLSHL FSQPKAPLSQGLMNFEMITATTSYLQGLWFSNPGCLFLICM GNQCYVQLQYIOLHFWQCVNVGSCRFMLGRCYVITGBOQAL ECFCQAASEVGEKEFLKILERSRDEIVSTPRQYVYDKVRLLD VIGLPELVQLATSATTEASDDW\KSQATL\RTCTIFGHL\DLG \HNSQAYGSL*POIPDSSRQLDCLRLVVLVLCERSQLQDLVEFS YVNLHNEVVGIIIESRAVADMLTHNYVELLYAFPIYRHNRYKAG TVMPYGRMLGREVRTLRGLRQKQCYLAALNCLRLIRPEYAWI VQVSGAVYDRPGASPRKNDGECTAAPTNRQIEILELEDLEKE CSLARILRLT\AQHDPSAVAVAGSSABEMVTLVQAGLFDTAIS LCQYFELPIFVEYGLAFCKLQFGGRARQARAWLAANQLS SVTITTESSATIRAWILSTYLRKVQKQREHVCYNKLLSHS VPLFNWLINSYKVDAAHLLRLVLYKLDLDTTPYOVIRCC VPLFNWLINSYKVDAAHLLRLVLYKLDLDTTPYOVIRCC
5826	3	871	KSQQLDEHSAPEPKFCTSVGAGCC*FRQ\SEKSGQRLKQKQIR AAQGRSQKHTDKADALHQHESLEKNTALRKEIQSLQALAN NSRTLIVHIERLCPNDASCASCAPGLGCDWDQAGLGPFCQGHG CREQLRFLQTPGSCYPAQLSPGPGPHDSPLGCLCPLESLGAP AVVAEPVVLSPFLPASHTGSSI\QSSSSKISALQPSLTAQTA PPQRLKLEHPTRGKLGSSPDNPSSALGLARLQSRHKKPALSAAT WQGLVVDPSPHLLAPPLISSAQVHF
5827	194	2287	GHGSENSALKSYTLREPPFTFLSGFVYAVLQDGRFASVFPVK RENEDKVNKAAPV*HLKTLRHPCLRLFLCTVEADGHLVTE RVQPLEVALETLSARVCAGIYDILLALFLHIDRGHLTHNNVCL SSVVSVDHMKRGQMETVCKYSGATSEFLASIGSIRUASIPFP EMSPFETTLPCRHARADPSTWESLITLHAGVSDVLS SPOOHTLSLLNP\PKNRPALCTLLSHDFRNDPFLVYVFKLS TLKSEEEKTEFFKFLIDRVCSLSEELIASRLVPLILMQIVFAEF

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			VAV\KSLFYLPGPKKHAQGETPCLLSPALPQSRVLPVLLQLF EVHEEHVRMVLSHIAKAYCAISLRBQLKKVAILPQVLG\LR D\TSDSIVAITLHSLALVLSLG2EVVVGERTKIFKRTAP\SF TK\NTDLSLEGDFPQPKFPINGSLDVKNTSEDSNFPSSSKK SEENPDWSGPE\EPENQTVNI\QINP\REP\CDVKSQCTLLDV EESSWDDCHPSSIDTKVNPGGGITATKPTVTSGEQKIPALLSLT EESMPWKSLLPQKISLVQRGDDADTEPPKVSSQERPLKVPSEI GLGEERTIQVKKKPVKDPENDMFADMLPEIKPSAAFLILPELRT ENVPKKDDVSPVWQSSKFAAAETITGEAGHNEEGELNNEEND W
5828	2	257	AREGGSLGAVAAAGELSVSCDFPAPITISWTRFVKNIEPQAVV NAVGSGSRMTDLTSSIPKPLLPVGNKPLIIVYIPLRLERVFEEV IVVTRTRDQKALCAKFKMKMKPDIVCIPDDAMGTADSRLYIYP KKLKTDVLVSLCDLITDVALHEVVDLFRAYDASLAMLNRKGQCSI EPVPGQKGGKKAVERQDFIGVDSGKRLPLMANFADLDBELVIK GS\LOKHPRIRFHTGLVDALHYCLKICYIVFLMENG\STISIRS EL\IPVLV/RGQKVSASSQGTKEKEGGSGKRGKLS\RIYS SFY\KEAKYTGTPAY\D\ACNI
5829	260	1259	FDGRLLIVECSBEDIKIKIDTITNKGCVNITSDSVGFANFVDNPS GTCLASAGSDQTVKVDVRVNLKLHQYVHSGVNCISPHPSGN YLTASSGDTLLKLDLKLKGLITVQLGSHTPVFTVSPGSGELF ASGAPQVLLARINDELCKGTLTKVRLKRLHDSPHLLDLY PRTPHPEKEVETVEDFPLHLRLIQSLR\STORGLLPLWISF LLILPQQQKPVVGLQCTVRKRPVDIS*TL*CHQNVCOQPRRK QKT*VTSPVKV/VSIPLAVTDALHEIMQLVLVLTQTVSILEQR LTLTEDKLKCLDENQKQLFSAVQKGS
5830	4436	3139	GGHAAPEERDLTDEQTEKLLQFODLTIESWDQCRHLEQHNN NIEAAVDRLNEQBGVPSVFNPPSRPLQV\NADHRIYSTVVSF PQPRLGLGWGYLIMLPRTTYTILDFRFAIRFIRDPFSRV TDPVGDIVSTHNSFEKYGRAHPVTYQGTYSQALNADKRELF LVLVHGDDHQSDSEFCRNTLCAPEVISLINTMLFACSTNKEP GTRVSGALRENTYPTFLAMIMLKDRR*PV\VGRLSGLI\QPCDL INQILTMDAQTVLVSEILERREERNQVLEQQQDEAYLASR ADQEKERKKERERKREKKEVQCKLAEERKQNGQKEERK LKCLPPEPSPDDPSVKIITPLPDSGRVEREPHPSQLTHDF LFLSKES\EKFOIEA\NPRR\VLPCIPSEE\KNPPTLOE\A GLSHTEVLVVDLTD
5831	71	2897	FCSDRCCLYLPDSINRKSCTAPQASQDRMAVMSERQVVD TDIISPRKSIIDSGYIDCWDSERDSLSPPRKRRDSDSFLDS PGRSRQTPSPDVLRGSDGRGSDSESLPHRKLFDVKKDDMS ARRTSHGEPKSAV\TNGYLPNGNQTAYPEAPLRKKABEYR KENSTATSPAGLKALQDYQRT\PVSDAESTSMFDMRCEE EAAVQPHSRARQCQLQINKQLEEDDKWQDLARKKSRKRSVS QDLIKKEERKKMEKLAGEDGTSERRKSIKTYREIVQEKERRE RELHAYKNASORAEGLIQYIERPTTSERVLKEREMPKILE RSHYTPWLS\SDMDPWPWYLRQQLPEPFKATVETTLARAS VLDTMSAGSGSPKIVTIPKAWPL\PKPYQCPMSQDVLTKF VDGKVSVMGNTVIRSEERERECPYAPAHSLTKSQMFCVAVH GSPLKQDNKS\TINTIKPNSVPQIAAATTRKTESPQSDKND GKGKRGKNIELASSPQHTFTTVTRCSPTVA\VEPSPSQKND VSEKDKQKPNEMSGKVLVLSQVKVPKSPPEATLTFPFLD KMPEANOLHPLNLSQVDSFSSEKSPVTPTFPKFWANDPBERRRR QKKWQSQSRILLQRYQ\KQDK\LKES\WKAQKEVEBEERY YEEP*LI\EDPVPTVTSSSSADQSTSSSTEGSGTMNKIDL GNQDEKQDRRWKSPQDDSDLLKTRSDRLKEKGLTECAL AHSNPNVSGVHEDHQLDTGAGPHCGTNPQLQDPSPNQQTEN PTHSHSDVPKTLPLDKSINHQIESPERKRSISGKLCSSGGL PLKGRAMI\ETELVYHQCFRQ\ICXGLQDVAVGTVTRR NOLLANDCYMBRSAGQPTL
5832	2454	829	PKRRFKHSGCAQKQCMILNLCQYPLQGEKFKUTSCRSKSHDFSN SENLRKLEKLGMSDLVSRLPITYRNAHDINKNSAPSRRVPPIF

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5833	170	3289	VPGGTERRKSSGVSFNTLSCREGDQICLYHTRKSCFDDKCH RVHFHLYRNRQFLDKMGWEDLNNMELIIEAYCNPKIERILCSSES ASTFPHSHCLFNAMTIGATQARRLSTASSVTKPPHFLITDWM YWSDPEFSGWQYGRQGTVHPVTTVSSSDVEKAYLAY/WYTGVR PGSHLEVPGRKAQLRVRFGSLRSEKPLGMIN*KGLEQTQIR/AP QDVTMTQTCNTKFFGPKSIPIYWDSSALPDGPGFKITLSSSSRE YQKWNLFNRTLPFFYVOKIERVONLALWEYOWKOGMOKONG GKAVDSRQLFHGTSALFYDAICQGNEDARVCGVHGTSIGKGSYF ARDAASISHTSLSQTYVTTHFPLARVLGVGFVGNAGSVRPFAKE GMSNAFYDSCVNSVSDPSIFVIFKKGQYFHYVIQTSSSKPSV TPSILLALGSLPSSRQ
5834	17	4020	SILCLSPCVQFGPKPVVLSLSSRSKHSPECTKGAEGKARHLHAT RQGHK*VHVEISKALMVYRDDYFRHSISVSATIVRAMITHKYR GRDWNVKNEENLHVAKNYTLTQTIPFERPFQHCVCLEWNN GYIWNLRANRIPOCPLENDVALLGFPYASSGENTGIVKCFPR RNRELSATRORMOYFVPTVSLMLYLHHYKCANIGIILYFVDSN ENYGTSPVLTBESYLHIGMELVGEDELAVTKFIIPIKEMFRL DISFNGGQIVVTTSIGDQLKSYHMQTISFREDPHYNDTAGYFII GSGSYTAGIEGFFGPKLYRLRLSLHQAQIFNLELKQLAEQIKL YERCAVEQYIVSVISAARKGGERGZACHANSYLDLQRYYGR PSWRAFPWKEELADHESLFPALLBNLLTVFQGNBESVSEIG GKIFECVAPRLSISDGLQESSIVPFLTSSCCCHASTYLA V FYEGVNPADLOGLMLKSYLVGGQSGERLESSNLYGXHYQIDN YPLDWEISYATYSIAITKPLDQRTLQGDQAYTEIRIKDDEIL KVQTEKEDGVFMMLKHEATRGNAQAQRLAQLMPWGQGVAKNP EAAIENYAKGALETEDPALIYDYAIVLFGQGVKGNRRLLALELM KEAASGKLEQAVNGLGWYHFKKNYA\KAAKYKLA\EB\MG N PDASYNLGLVLDGDIIPGVPGNQTLAGYETHKAQGGHNGTLC WCLSYITGNLETFPRDEKAVVMAKHVAENGTGLHVIRKGLN AYLEGSWEHALLYVLAETGIEVSQTNLAHICEERPDLARRYL GVNCVNRYNFVSFQIDAPSFAYLKMGLDITYGHGNQSDLESLS VMTAGAAQDQSGFPLALLIBGTIYFPHILDFLEIDSTCH SNWISIQIAYPERCWSNBEESFPCSLAWLYMLLALGKALILH SALLYPLQTFLSILIAMTFVQPGVSASDPPRPSQASPTAT STASPAVTPAALDASDQDQPTVTNPEPRG
			RFRGGGRVFFGAFFASPSDSLQGNQSGPPRTKPPRT/QRCG SAAPGPIQGSSS*VPLRLQEQKADCPILSILALKERMAAOV LTEDALSNDVLEELPLDQQFCIEPPPSLLIYNFNTNTEFDR NAFVTGIARYIEQATVHSSNMNMBEGQRYAMVLYTWRSCSRAT PQVKCNEQPNRVEIYKTEVEVLEPVTKLANFMYFQRNAIRRPC GEVRRILCHAERKDFVSEATLYLTKGFINMFAYLDELKNMKCSV KNDHSAYKRAAQFLRKWADPQSIQSQNLSMFLANHNKIQTSLQ QGLEVSQYETHLADIVMLCDVYENRMVLTSEKHMCLKVMGF GLYHKSQSVSNITKLAKKINLSKIDKPYFLQVFLGDMGII ELARYKTSNHTENKSWTCSSGSSPDIICBQAIQREDM RPISELARYSNSVEVTTSGRQACKTDAEYKFLDPLAGGLQL SONSARIVMEVYSKWLHPYTDKYNKDCDPSSEYERATRYNYS BEKPAIVEVTAMIKGIQVLGMKRESVENHAIRHTVYALQDFSQ VTLMEPLRLQAIIKKKNVQSVLQAIRKTVCDWETGHEFPNDPAL RGEKDPKSG*DIKVPRAVGPSSQTQLYVMTLESLLADKSGSK KLESSLQPTLIDIEKPHRESFYYTHLINFSSETLQCCDLSQL WPREFFELSLTWGRRIQFPTEMSMPWILTDHILETEKASMMETVL YSLDLVNDOSAHYALTFRNKQFLYDEIBAEVNLNCFDQFVYKLADQ IFAYYKVMAGSLLDKRLSSCKNQGATILPPSNRYETLLEKQR HVQLGRSIDIENRLTORVSAAMYKSLSEIAIGRFSEDLTSIVE LGLGLEINRMTKLKLSRYTLDPGDANFRANINVSAPFGRITL HVFMELANDFLNFCVMSNRPVTVLPGSDPFAKQVTPADP QYLLKSALALAYSNTYGSYRNFVGPPIFOVIRLLEGYQGLAV MEELLKVVKSLQQTILQYVYKTLMEVMPKICRLPHEYGSGPIL EPHFWQLKDIVEYARKLTCVFNLEVEVGNAILFCILLIEQSLSL EVCOLLHAPFQNIIPRHYVKEGERLDAMKRLSEKTAPLHLVP

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			LIERLGTPOQIATAREGILLTKERLCGLSNREVELTRIRSFLD DPIWRGPIPSNGVMHVDRCVEFHRIMASMQFVYCVPTHEFTV EQCFQDGLHWAQCMIIIVLGGQRRFAVLDFCYHLKVKIKIDGKD BIIKNVPLKMKVERIKFQILNDEIITLIDKYLKSGDGGSTPV HVRCPPIPIHQSCLASS
5835	4209	1904	SGNIRNAQSGHQIDFQVILHDLKQKFFPVPRVVSRCHLQNNNNI TACCAVISQSBSTRYLVGRIINFSDDSGISGLRNHMTSLNLDLQ SQNIYHMGREGSRMNGSKTLTHSISDQQLQGQSGNSBLFQEQBPQ TAPAFVQPGFNVFGMSSSSGASNSAPHLGFLGSKGTSSLSQQT PRFNPINVTILAFNLICGTGNTFTSLIHGVPFVLANSPOQNSIYY RPIYTPPGTTRKTCGSGWGSQRRNPNCVQVQSGPQPVWTC PASNPLSHTSQCPNQGCQCHQTSNHYVMIPISEPTTSPPTHSOGS SQSSAHSQYNTQNTSITGRKQNIKLEPPQRNNSKLASSGPR TSSTSSVNSQTLNRNQPTVYLAASPNPTIDELMSRSQPKVYISA NAATGDEQVMNRNPOTLFISTNSGASASNRMSQVSMGPFIHH HPKSEALQNSATSIPRVVVTQNPNTYTFKTIIVSPNKPFAVSP GVVSPTFELTNLHNPDPHYVTENIHLTDPTILAVDRISBTRK LSMGSDDAAYTQDI*RISSNMLGWVAJACNSALGGQDQRII*A QETFTSGNINRIALYRRF*NYAGMVAHTCSPSYSVD*ALLVHQ KAMRELQRELEIKKKLKDLSSEVMEENNLTRRLKRSNSIS QIPELEHMQGLASCHRLQIDIDCLTEKIDFPAQRGPHNPSAI HMFQNICFQVGPVFKPKQDQSIKIKPTJDTDEBQAGWQCTA CTFLANPALIRCCCKEMPRHF
5836	361	2303	PRITNCGIICCSVNTSEALFISQLKEDLLYNLQKQRPNSSKOLK SDVNYQCLPSAHLVHLRGVLTTPQVBERGNVFLMNGEIPSGIK VZAEENDTQIILFNVLSSCHNSBILSLFSFTVQGPWFIIYQOAS HYLWFGDRDPFGRSLIMHFSNLGKSPCLSSVGTQISOLANQWQ VPAJDFSEILILSLSPDALFYNCILGNIFLGRILLKMLLIA* VKFQOTVOHLVYOR*QMKPNCILKLLFL*I*CHKLEWRLIAVI FPMCHLQRYFKSFLIMYT*KEVIQCFIDVLSVAVKRVLCLEPR DENLTANEVLKICDRKANVAILFSQIDSHVIAITLADRIHFLDE PDLNVAVAFIABEKTMTPTFNKRNKQKQKCEIPSEBSFKDVA AAADSPNKHVSPDRITGRAGLEKQAVSPSRHFWFVNVSMSE ELQKLRTRICHLIPLOTVDLSDICAYNFASSGICQVHLAGQ VEZYQSNAKVILVITIGADTQIADGYSRHRVPOSHQGLKAME MELGRISRNLRDRDVIHGDGKBPFFLDENVVFLANSLPW EFANIITLPRGIGKLLRLIAVAVLGLTASALLPKRAMQPGSRIA KMEKINEKASDKCRLQIKLSLGNLSIKETKL
5837	4792	903	NGNVAQAPVITNCYCATGSKDQITIRVSWCSRGSGVITLKLFPFL KRRGQIDPTVKERLWLTLHWPNSNQTPQVLSSCFOGELLQWDLT QSMRRKYTLFSASSBQGNHSRIVFNLCPLQTEDDKOLLSTMSD RDVKCWDIATLECSWTLPSLGGFAYSALFSSVSDIGSLAIOVGDD MIRVWNTLSIKNNYDVXNFWQVKSKVIALCWHPTKBOGLAFT DGGKVLGYDTSNKKPQISSTYHKRTVYTLAWGPVPPMKSIGGS GDRPSLALYSQCBQIVLQHNPWKSGEAPINXILIDTNSIKIY KLPHTELSWADGKIMALGNSGHEILITOLDLNLKLCCTIQCH HKLNTLISMHHRVSGFAQKLSYLMWSQSGSPFCNLCNFKC P*KAAPSPSPDQLQSPVYRTPQCHTQDQYVWNAWPHH*WGL VFCPPIDGYSFGCD\AFFGKEAPVAIFRG\HQGRLLCVANSPL DPDCIYSQ\ADDFCVHVKLTSMQDHSRPPQCKKSLELEKLESO PKAKPKKKKPTLRTPVKLESIDGNEBESMKENSGPVENVGSDQ BGRQAREPPELPCGIAPAVSREPIVCTPVSSGEPSEKVPNNKV ILLKKKPPKPKPETLIKRRKARSLPLSTSLDRSKEELHQDCL VLATAGHSRKLNEVDSADVEERFHLGLFTDRATLYMIDITZGQ HLBNHGPPELFIQIMLWKGDLKQVLOTAABERGLTDLNVAAPAA GYHVNLAWEAPAKLQCPQDQYVIAASHLSIHKVVAVLELKS NHYPREALAIKARLRPEDPVLKDYLSWGTVLEKDGHYAVAAK CYLGATCAVDAAVKLAKKQDAASLRTAELANVQDELSALSLA LCAQRIILANWVQARALHBSLQCGRIYKCLLBSHLS KQGLSBGKSSSYHNTWGTETRPVVRVTAWKSIPSLDTQCY QRAQKIQNTIKYPSATNNTPAKQLLHICHDLTAVLSQQQASW

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			DEAVQALLRAVVRVSVDGSGFTINQEVYAPFLDEGCDHLRDLKLD HQSPATPAFKSLAEAFLYGLRYEPWLSLRFCPCNSSVWVAGHR TLSVEZSQQLDTASTETDPTSPQPMNRPSHLDRI/RTREGERM LSTFKELFSKSHASIQNSQRTVAEQVQTLAEMIRHQKSQLCKS TANGPDKNRPEVEAEQPLCSSQSQCKEKNPELPLPELTKRLTE ANQMAKFPESIKAWFPDVLCECLVLLIRSHTPGCI AQEMQO QAOELQKYGNTKTYRRHCQTFM
5838	110	98	RTMPHLVLPFRDVAIDFSQSEWECLDPAQRDLVDVMENYSNL ISLDLESSCVTKKLSPEKIEYMESVSGRIWGVSTITFPQYNG IADNMCKGMBGQVSKSEGLVINKVITCEEATSHSTSTSTFH RII/HYQCKIVKCKSCRGSPVSLQCLIQHSEMMNT*KCEVNHG RMTSPSYTHQVFKELGKPEVECKGKAPQTSLLQCK IHNKPEYQCNACAKAFIRGSLTHQRVITQKFPYCKCKGKA FSYCSQVTLHQRIHSGCKPEYCKDQGXAFILGSLQTYHQRIHSG EKPYECKGCKAPILGSHLYHQVHTGKPYICKCKGKAPLCA SQLNEHQRIHTGKPEYCKCGTKFFRGSQLTYHLRHSGERP Y KCKGCKAPISNLSLHQRIHTGKPEYCKCKGKAPICGQLS EHQRIHTGKPEYCKGKAPIRVAVLTQKELHSGKHIYECKEC GKTFVRAQLTYHQRIHTGKPEYCKCKDPAF/HLNLTILSEHQ RIRHSGKPEYCKQGR/LPIRGSHL/NEHLRHTGKPEYCKEC GRAPFSRGSEHTHQRIHTGKPEYTCVQGGKDFRCPSQLTQHTRL HM*EYSSSKCMHSIALASLDFAILQENFN
5839	1	2425	GRPFSPRALPRFLRRRGDGGVDFVDFECLQD/SFRPRAAL EEEVGDAVLELKLADKVLKCLIAWIDTGLFQANKPMSI GR/LAONS/NDADA/VVETKPAFSLQSLQEMINFTLL/L/PNS EIN*GHSQPCFVKDRLKFKDAKQFENSQ*KKKIALVKNAPV FSRPASLEL*KFPMLTATKRCFRHIALDYVLQINVLQSKRRSE ILKSMLSFMYAHLAFHQGYDLFSELGPTYKDLGSQLDLRVGJA AKEKREMEQKHSITIQKDPSPRDSKLYNVDAANGIVMEGYLFP RASNAFKIWRNRNFSIQNDQVQVYKQKDPNTVVVEDRLCITYK HCEDIERFRFCFVVS/PTKSCMLQADSEKLQAMIKAVQTS/AT AYRKDDSEKLDKXSSFSTGSLDSSGNESKLLKGSALGRVO CIPGNASCCDGLADPRWASINLQITLICECSGIRHSLGVHFSK VRSULTDVTWBEELKIMCELGNDVNVRYEAVYEMGILKKFPQG QCKEKAIRACYVERKFDVXFL*SLPFP/BOCKKAFKSSSE EKRLS/SKQFPGDQVRAKASQSSVSDSQTQSDGDSRSLPS TVSAMSLVLP/PSGQDSS/PLDS/HLNPGILQYRASYKNTLPM AALAHAGADVNWANSEENKATPLIQAVLGSLVTCPEPLQNGAN VNQRDVGQGRPLAHATVLGHTGQVCLFKRGNQHATDEBKDP LSTAVRAANADIVTLRLRLANNEEMRESELYQGFDETYQDIF RDFSQNAANNPEKILNRFPQDSQKF
5840	698	3610	KHLELFRCHLTLMQITSSPRNSSEORAFNSALSRTQTQSAFALQ GLSSILLOSVTGNVPVASEAASQSTASANTVTVTIKRNLPS S AQFPIPKSFNYSFNSSTSEVSTSSASKASIGSPGLSTAPKFL SNTKGFTATHNTS/PAAPPTETVITCQSEVSFKPL/ESSESTFSL YEMKIMFNLGNGPQSVANLKHNPAGSLGSSAPSSBSHSDQ RGPSTSLNDLQVFRDERSGTTPKDMMDRTSGSVDTMSLL SKLISPSGSTPSSTSPGRDSEYBELANSYSTVTPDPS/SGHS S SPYKQSDGMKPSLMDSSSQKFYPDTSFQDEYDPRFVSGP PPSAMNLIKQKPAKSTLSSKLSDTTEYQPLSSYSHRACEFGV KSAFPFVSRVLLDSSKNCDRLSSSGILFGAPSVRGNRPGDSRP SPSSKNDSPFTFDSMNSLSQSTTGHSLLPQKQYPSFHPVPHRS LPSQNTLAAPTGHPTPSGVKVLASTISTSTIEFINKLNAS RKPSSDDKHPQCAPSKGTPSDGVLSNLTQPSLTADQQQOEHY R IETRVSSSCLDLPDSTERGAPITETGYHSASNRMSGEPIQT VESIRVPQKNGKNGHGRASRVGMFDLSTSGSSFDNGPSSASELA SLGGSSGGITGFKTAPYKERAPQFQESVGSFRNSPNTFVEHH LMSPLSHTGTPQRIKGVGSSAPFVVPKDHQJLFSRDAFTELES VDSNPTFKBALAHAPFPFGBESGILFTTPDP/PSGHS S SOGSGPFTPTPTPTPVRSSQVVPVAPPLAEHGVAGAVAPF KDRSSLLQGTLAERPGVLPGRDGGQPTQDINGPOLSVRRESL

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			TLPSHSLHLGPPHGGGGGGSSGSPFLGSHRDTLSGGIT LRSRPDPFRPREPFLSRDPFHS LRRPRPPFAGGPPFPAKRSPF PPRY
5841	1909	762	GLRLPLVLTVNPMKPSWLRSRTEPSKRLLCRLTLCGSGWSSRY TRSMLKMTTS INNRSRSTSTKSTRTSARPLGTATVIGLSDSPTW RHCNMTARSCSGEKGHWAPQVGVVLLPGVRGCVSRVSPS PFGDGLDGLARRGSVA SALASGLIVEEPMLGPPFHPTRFKVA/SAK SKEDLVSGQFTETIEDPHNTFMDLIEQVEKQTSVADLLASND QCS*SDILVYVLRLLTSGYLQRESKFFERFIEGRTVKEPCQ/QE \VPMWCSESCHHIIAALAGQLGRVHGFGWYMGPRPRAATTNPHI FP*GLSPKPVYLLRQ/PHEDLLKGLGSSFLQCPGCPCLLARA LGHCYGRGSPVVMKSPYTPPFLSIDSPMYT
5842	307	1918	QKPTA*FKRLSTCGCOREMTCPDLPQJINMFTISLCVPRUEKL WSSRRPRTERNLLGTACAIYLGPLVSQVGRASLQHCQAIEKGP HRSRDTARPSPFPEILDGTAPPESQNGSTLQENUVYITR*RSK RSKPANIRGTVKPKRRKKHVASAAPQGLV/GPSLCPQBA/EG KLNL*HLGTLEQWTLRLESDPGCGVGR/VRAGSDFLQPS8 RESNIRIYESAPSWLSKDDIRNRLADSAGLRPVSRSRGA RLVLLEGGAPGAVLRCPSPCGLLQPLMDSEVFAPHLDRILGL NRTLPSVSRKABFIQDGRPCPIILMDASLSSASNDTHSSVKLTN GTYQQLLQKQCHNGRVPKPSGCTEIIHHHWSKALWDFDLQI YNRLDTKCGPFPKADACVQNGLRKCDQGSAAALAHIIQRKH DPHILVFTNKGQFDSBDLAFKLLBGIKFPASAVIVLKSQH LRQKLLQSL*LDKQYKESQGRQKIKLIDVISHRAKILITYIN AHGVKLEPMNE
5843	500	1453	GTARLVTCNWLHGQ*VKKPAMSPGVWL/Q*CRCPKGGWLAGOM RGRSMSPQQLRRAQSSCCHFMVKLLDDGTMTI PGEKVAITSL DALVTFHQQKPIEPRELLTQPCRQKDPANVDYEDLFYLSNAVA EBNLCPVSAPFEASPKPVLCHQSKERKPSARM/RQNNHQSGHFL LPPKIPSDRDPPTLEEQNA PRERPGPAPAJKKPPHCBVLVT LQCPFIEHGLDRPWRDKQPSRLRSHLGGQRLHGS LCHHISQKP LTAPGTKKQKGFHQGRFVQQLH*GDRPGQSLAPNGSSPSILPG VQARAPGLGRA
5844	202	2471	FDGAVLSSINNAVLPGPLQLLQGLVLTISLSIRLIQAGAYYGI KPLPGPIPGMPCIPQYFPLQGVPMKPLARDGLAMGEMPHL QYQKEYPHLPQYKESIQPARRWKGRVAVKKGKELPLASLRQSG PQREGPGPRGPGPQPLGPHGIPGIGKKPGQCPQVPGVKRGMQW PGKPGAGMHFGAKGEIQKQKRIQPMGTP*PDGPPGPHGLGIGK PGQPGPLPGQPGKDRGPKGLPGQCLRGPKDGGPMPGAPGV KGPFGMGSPGPGVPLPGVGKPGVTFPGP/QSGPLGK/PGAPGEP GPQSPIGVPGVQGGPGIPGIGKPGQDG/PPQGPQPGQKRGQGL PGLPGPGLPGIGKPGFPGPGKDRGMGVQALGPRGSKPIGA PGIQGPPEPGPLGPIPGMPGPPGALGFGPGKGGIIVQPGPPG PKEGPDQGFPGKPGFLGRVGPDMRGFPFGPIGFKGEHQKQVPG GLPVPFLLGPKGEGPIPGDQGLQ3PGPIPGI3GSGPIPGPPI PPKKSEGLPGPGPGFPIGKRGVAGLHSGPMKRGALGPGQGGOL PDPGDEGPPSPAVMPTTPPGQGYEDLDMWGLIGDVKRPHAYG AKKNGKSPATYEMPAETALETAPFVQVQAPVKNLLYNGRQY NPDGTIGTCEVPGVYFAYHVKKSGSNVVALFKNRPVMTD EYKKGFLDQAGSVAVLLRPRDGRVLMQPSDEQNALQAGVIES SFGSYLLYM
5845	215	2061	HASNKASLQIDMNPDKERT*ANCLYNELARNRNVQPPYKLLNER GPAHSMFVSQSLGQOTWESBGSIIKKAQAVGNKALTESTLP KPI*KPPKSNVNNPGCITPTVELNGLANKRG/KPAIHRPLDLPK PPNNRNANYNPQVNYQRYHCDIPKIFYVOLTVGRNEFP3SGKT ROARRHNAAMKALQALQNEPIERPSPONGESKNDHDDDKANKS RLSLVPRIALRNNKPVSEVTEKESGPPHMSFVTRVSVOETSAE GEGNSKLSKKAATTVIABLKLPLPLPVVEXK/HPFKRKPRT IVMKAPRYQKMTFISELQATQQAQKKEPDIYLSERGMPPRRR EFMVQVKVNEVATGTSKMKLAKKSLABLLQGLYKASTNIQJ DQLEKTRNKGWNSGPKGPPFETNTPKGIHLSPVQSGWAS



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5846	1126	456	RHKVISGTLGYLSPKDMNQPSSEFFSTPTNSSATARELLMNGTSSTAEALIKGSSPTPCSPVQPSKQLEYLARIQGFQVHYCDROSGKECVTLTLAPVQMTFHAIGSSIEASHDQV*YATAILLCYGARKWKAKIRMEAMCAHAALLSLIHYLLAPARLEKSLKFLALGN
5847	2769	505	FSKLIKMTFIIIGISGVTHSGKITLAKNLQKHLNCSVTSQDDFFKPESEITDKNGFLQYDVLBALNHEKMSAISWMBESARHSVVSITQESARELIPILIEGFLFWKPLDITWRSYFLITPISECKRRSTRYVQPPSSQYFDGHW*RWILKIRQEMQDITWVVLDTGKSRSDILQVYRELIQSLAKQKCLQVTA*RRVITNFS/CK*IRKLGQVI
5848	22	2961	APEMEDLSSPDSTLLQGGHNLSSAPQSESV*FKDVIDTPQREWKOLDPQGRDLFRDVTLENYTHLVISIGLQVSKPDVISGLRQGTPEWIMEPSIPVGTCAHWETRLNSVSAPSPDISREELSPEVITVERKHKRDDSSNLLSEWIEGSLRQQAQCTLPKEIKVTEKTI*PSWEKGPVNNPFGKSVNVSSNLVTPQSPPEETS*TKSIRKQNSNPVKKEKCKKCEGKAFYSICALIHQRTHTGKPYKCN*/CUEKAFSRSENLINHQRIHTGDKPKYKCDQCKGFIIEGSLTQHQRIHTGSEKPYKCDQCKAFSQRTHLVQHQRIHTGSEKPYKTCNCGKAFSQRGHWHEKHLHFGKPKCDQCKDT*TKSTHLTQHQRIHTGSEKTYKCHGCGKAFNPSPT*FHHMIFVSGKYS*CNCGKAFSQRHNLQTHQMTHTGKPYKCDQCKGFSYVSLAQHLKHTGKPYKCNCGKAFS*YSSLTQHQRIHTGK*FSCSECHGAFSY*SNLHQHQHTQKAYECKGKAFIRSSSLAKHRIHTGKPYKQCEGKTPSYGSSLIQHRKIHTGKPYKCNCGKAFNQNHLTQHQRIHTGAPKPYECAROGKAFRHCSSLAHQKHTHEEKPYCNCKEKTFFQSSHLTQHQRIHTGKPYKCNCKGAFSRSTHLTQHQRIHTGSEKPYKCNCGK\TFPSQSTYLQHQRIHSGKFPNCNCGKSPRYRACALNKHQRLHPI
5849	3545	1895	AAPRELLKGGSDQRTPEFLPALLRPPGPAEAPERRRNPVSKQDGRGLAVFISDIRNCKSKAEIRKINKELANIRSKFKGDKALDYSKKKIVCKLLEFLFLGHDIDPGHMAVNLSSNRITYEKQIGYLFISVWNSKSELRLINKALKNSRTPFWFLALGCTASBVLSREMAEAFAGI*PKVLVAGDTMDSDVQSALCLLALYPTSDVVFMDGTSKRVHLLNDQLQVTTAATSLITLAQCNPEEFKTSVLAVSRLS\RVITSASTDQDYTY*FCPGFLGSVKLLRLQLQYPPDPVAVRGLTECLSTLLNQAQEPKSKKVQHSNAKNAVLFEASLILIHDSFENLLVRACNLQGGFLQHRHTNRLYLALESMTCLASSEFSHEAVKTHIETVINALKTERDVSVRQAVNLYAMCDRSNAPQIVARMSYLETADYSIRKEIVLKVAILAEKYAVDYTW\YDITLAILRIAGDYVSERVYRVIQVINRDDVQGYAAKTVFEALQAPACHNVLKVGQYILGEFGNLIAGDPSSSLIQLHLLSKFHLCSVPTKALLLSYIKFFNVPEVKPTIQDVLRSDBQLRNADVELQORAEYLLRSTVASTDLATVLEBMPFFPERSSEILAKLKKKGSTVTDLDETKRDSVYVNGQPEPA*SAVSTPSPADLLGLGAAPPAQADPPSSGGSLVNDVPSDSASTAPALACSEENFARVCKNNGVLFENLLQIGLKSFRQNLGRNFI*YGVKISTQBLNFTPTLICSDDLQINLQIKPVDPTVEGGAQ*QOVQVNTCEVSD*TKAPVLNIQFRYGGTFQNVSVQLPTLNKFTOPTEMASQDFFQRWKQLSNPQOEVSQNIKAKHPMDTEVTAKIIOFGSALLSEVDPNPANFVAGIINTKTQIGCLLRLLEPHLQAGMYRULTR*SEAVSQR*CELLSAQF
5849	3545	1895	KREIKETVPHHVQAGLELSSSIPPSASRSAGITGRKHQVQ*P*DCMSSLPPCPTREDRPSLEALQTHQXQDDDDGOGIEVERSDEFIRDMKYKATNKHSHLHREDHITIEDLKMKWTKSEVHNNTLEDTLQWLEPVELPYKEMKRDNVKGTTLPRIAWEPSPMIQOLKISDRSHQKLQALQVYLFPTPTPRHNNKGFILTVSIVIGVGGCWPATYQNTKSHVANNKDLSSITQAS*MDLGRLEKAGSENNRNVAVKQML*RWGDEIN*YAKAECKLRELEGAECLSRQYABQELQVPMAL*KAKEPELRSSESVDPALQKWLVLTHKEVQYIYINIKRQNAEMQLATADBAKIKKKRSTVPGTILV

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			AHSSSLDEVDHRTLEAKKATSELTCLERLFRWQQLKTCGFG IAHNSGSLPSTSLYSDHSMVMPVSI PPYPAGGVDDLDHDT EPFVSGFPPTMAKPGSLARSSSLCRSRISVPSSGPGQAQLA PHAPHSHPRHPPHQPHTPSLSPDPDILSVSSCFALYRNEE EALYPSAEKQWEVPTASECDLSNNSIGRKQSP/SKPDIPIN IIS/DERYQEMRCR*RIIPSGGIL
5850	3	1895	KAVINFSASGVSISLTGSPNPHIDASMMILKXNITVYIVPELJ LTCRLKMKTRDVRGGNGSGTSMEDLLKFRQYVYKWDARVFC SGASPEVAOKVILNAIKRYQIVDSFTFSTRHVPEDCEQKQVSA EFFTEAVTGLASDGLPTPAKEPFKLSQGEKSLVACTTVERA QTLLECHTIPADIPARLOEMETAYGKNTFACSKTAPRHLSCN QFLELHGPTGSGFKDLSGLMHPHFAQCIPPSNVMILVATSG DTGSAVLKSGSRINKMDKQRIAVVAFPPENGVSDFKQAKIISG RENGWAVGVSDFDFCOTAIKRIENDSDFTGLTVEYGTLLSSA NSINWGRLLPOVYHASAYLDDLVSQGPISFGSPVDVCIPTNGF NILAAYVAKMMGIPIRKFCASQNHVITDFTKGTG HYDLRGKE N* AQTFTVQ* I FLPLNSLNLRLHLLMKNKQDQMLTELFRNLES QHIFQIKALVEIKLQDFVADWCSBGSCIAALINSYNTSGYLLD PHTAVAKVADRVQDKTCFVSISSATHYSKFAPIAMQALIKEL NETSSGLYLLGSYNALPFLHALLERTKQEKHEVYQCAADN VLASVDFCIQWQFI
5851	3120	1802	RCYIQFLALLTSTSRARAAATAAEFPAGSFSVWTRAGLHNRQ RCCGSLADVLTSAKPLYLGHSLSTGDRDMMGFAVSLVELY GHSLLTAVTGLVWAGSVVLVGAIGDWMDKNARLKAQCSLVV QNVSVILGCIILMMVFLHKKHLLTMTHGNVLTSCYILLITIANI ANLASTATAITQRDMIVVWGEDRSKLANNNATIRRIDQLTNI LAPAVGQIMTFGSPVIGGPFISGWNLSKNCVEYLLWKVYQKT PALAVKAGLKEESTELKQMLHKTETPKPLKSGTHLMGVKDSNTH ELRHEQEPTCASQMAEPFRTFRDGVSYTYNQPFV/LGWGSCFP LYDCPGL* LHHHRVRLHSGTBMFHPQYFDSISYNNKNGSCFP LATSXMPGSDSDSLRIGTAFLELVCDLCHIRANKPPGLVRFSF
5852	1	422	KTFPPSSLCPLRQPEVGVSGQPLTDEPLSLCRSHKCRGKMG SSSPSLPALLARAPGHCTHRSQPEMRLLSISRLKQGAAR SQNAQAQPTILL/PLRLKSLPSIW/SLMGFTTSQGP/WFRQ YVYFISGRH*VLPTESDFPYVWMDPGHGLSHYSPPVYVLT FVSEIRRVVAGKKQSVYFRCGGCRAPPLITGGGVSGRKQRP ESGAWALAPGLPAIHGRSMEB
5853	223	1346	RLLGLSKVRLHGFASAMISDPEPTQDPCPGHWRSDRLRPR PVSLTGLTLVCK*AAQGPQV*HSVLKLCFGLGG/PCLL/FPFIRP LLHPRPRPLHPGTRQVAVEPHALRVVHVAHEBAGIRAAQPGH GGVEIPQ/VGSLGARGLRPSRPSRRHNRVAPPGRPLATP HRRKFPDPALTCFGLQDQGPREGQQGSGRHDITLGDWGBSE SRWVRGNFRIGTAATLIGFSRNPITNGSENWGLSVLSIQEEDPT QWSEIRNPADMGHPQRWASP*HTPPGLPEILRANPEALRAMEE ALJGRFDPATSVPSALS/CTP/PEWSPSCIRLQGBETLAMPFV LSSICITBSQNWTFCLLLPLCPKSL
5854	86	938	KGRNTPAKKOKALNRENAS*NEY/SANQOIRIENHILQF LHLCAMIKRVLLERLNRKRLZTSGRTLDWPNQRIETVSAR QOIVTYREXGKRN*EKERKDLGSRFNYNLCIIGIPEDEPAS GAETIKDLLE/ENFPELKNELDLQMEKAHRPLKPNKKAASH TRVTF/LKFORRNILQASSORKQVYKIAKVLRTSDSPAILMA RRW/N/PISRVLRBNNEFFRIYSARKLSFLYKGNWTFPIQGG LGKYINQELSLKILLKDLQLTENL
5855	536	2391	LRSYGCAPSRISHLH/FLFLLLSLIMGYSSSEFPITDWSAP PISLTHRVLSQSQSLSGNCHICLCTHGT*PTALPADLITWTGS NVSLHISYLAIFPLADSLFKVLP/LGN*SKAKHLS/KLSSLSMVS GRAVALIHLIASGLTISQTHYASSKPPIMGY/LSTQTSPISEFP LCLSRTPNPNHATVWQVPGSLCGLIFTL/KTCGRSLLHPNY KLISTSARVLCFPGSPPTIWSLHMTVSSFSSEFPIGFPFA NSALYVSSLGPGKNVTIPSFTVGT*QPPHGRSH/RLIVDKDN

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SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *=Stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
			FFLSFKPNSLHQQLSPQ(TPYOALGAALAGSYPIWENNTLSGLPTFTYINFLSTPSLFFLCDTN*Y.CLPANMSGCTCTVFPQAPTINILFPNCTILISVEASISSSPIRNKWALHILITLGLGTITAAIGTGIAGITTSITSYQTLFTLSTNTVEDMHTSITSLSQRLQDLFVAGILQNNRVLDLLTTEGGTCIYLQEECCFCVNESGIVHIAVRRLHDAEEL*HQVADSWWQSSILLRKPWVPFLOPLIFLFLLLMIGPCIFNLVSRFISORLNCFIQASMQKHIDNI FHLCHV*YQSLRGNNSEAPEPRP
5856	173	1137	PLHRLGGLSIVFLPYL*/YVIFLYGGTIIILLLIFISIASILYKFCQVLLYFPQSSSSRLVFMPTGIPHEMIFRTKDGIRINLLILIRYTGDSNPSYFTIIFPKMAGNCGHRIIPALLLNVNKLKRLLLVDYRQYKSGEGEAGEEGYLDSRAVLQYVNSPDLKTKIYLSGRSLG/GAAAHILASDNSHRISIAINVENTFLSIPIHMASTLTSFPPMRYLPLWCYKKNKFTSYRKISQCRMPSEFISGLSDQILPVPWAKQLYELSPSRITKRLAIFPDGTHNDTQCCGYTALQEQIKKVVKSHSPERMAKTSSNVITII
5857	1597	563	KLIGKVLVLSVADAMAA*AVEPQSGALSGSEHMLGSPTPSPKGVNAQPLPGFLMGDLPAFVTPQPSRISGSPVGVMEKSPILAGGSPQPVVPAHDKDSGAPVRSIYDDISPSGLSGTPLTSRQPNISVMQSPLVGVSTSTFGTQGSMEFSPASIQGRKTTLSPAQLDPPYQTQGDSTLSHHLLDSSWQDCINGFLKASAYSTILA(PAQYQGGIS*NMWSTGWWHILYUSHLQAKKALSCKDRIFPESIMIGVKFPCI DKSVMSSDRCLASPSLSAPTPPIKTLGTTPQPSFTRISTMRPLATAYKASTDQYVLSDRQTPKDKDSLVSNYEMVCH
5858	355	1419	PFHQPAASSTXHQCCQPPPPFQSSKEVWAGTGTGAZGVGSAPDASSAPPATPTPTSGAPPSGSGPSTPTPPAVTSPAPPADPTTPPSGCVPTTTPPQAGGPPFPFPAVFGPGPKQGPQGGPKGGMKPGPKPGGGPLSTPGGHKPKPHRQGGEPGQGHHPFYHQHHQGGPPGGPGRSEKISGPRRGFKANLSLRRDGRKTYTQRCRCFLLOYLLISLRNNSRRLFAKINENQKFLSTKAKDSFFKLESRALA*NCPKFELG*YTP*GGROLPSLFPFHACLPLSCSVIFSPFMFQ*HCWGRKPPFRLMGLPHLKGAVCNMDDEWEGPTGKGCHLNFAS
5859	307	1503	GSSAPRPSLRMLGRKTKNEVSFKPAEVCQKTVKKTSSPLLRNLMPSPIHNGPTTPRTDILCLDSFPAFTSTSDGVVSRNQSFLRTPIQRTHEIMRRNSRNLGAPSYLARSADWPDRYSGSSFTTSDVSFAVENGDSGRYYYSNDFDQGRKLPGDEARHDKRYEYVNDHLPQPMFQNGRHASGIGRVAATSLGNLTNHSKDLPLPDGNSVDWIMEGRKYIYDHTNTTTHNSHLPERGLPPGWERSERFGTYVDVHTNKKAQY\RHPCAPTCTSV*STTSCHI/AS/ROOTERNO SLVVPANFVHTABIPDWLQVYARVPKYDHILKWLFLQDLADLT YQMLLMLPMKELEQIVKRYEAYRQALLTELENRKQROQWYAAQHQKNP
5860	2956	1270	TIRVEEFLPCGGKAQLSSASLARGLLLOPPTPPPLLLLP LLLPSRLCGALAGPIIIVRPHVIVAGNNVSLKCLIEVNETITQI SWREKHSSQTAVHRH*YQFSGVQSGVQLFNTSINDATITLNIQSPDSGKI CKAVTFLNGNGSSSTTVYVETVSLIKLPSDLIDCKNKVAALICIAATGEFPAHIDMDLGEWSESTTSFPNETATISIQYKLPPFHARGRRITCVVKGHPALAKDIXYFLLDIQYAPESVVTYQGNFVGRKGVNLKCNADNMPPPPKSVNSRLDQWFDGLASDNTLHFVHPIITFNYSGVYICKVTNPSGSKEVTQKVHPFQHPNSLPTYPPLDPAQFQNASPTA*TSRD/LATEP*KLA PSLPLSL/LATIKGTQLPTIIA*CSGVGALPIV/LVKCRGLGFTCYRRRRTRFGDYFAKXNYIPPSDMQKESQIDV/LQOEDLPDPDSVKKRNNKPVNLLIRKDYLEEPKTKQNNVNNINRPERMDYEDLKMGMKFPVDEHYDENEDDLVSHVDGVSISRENYV
5861	2051	1305	EVCAQVAFWLVAASGDDSGGDKGCEGVSGWSGMSRVVARLLSEGQGIPTACAAFAQQQAG/EPREGLAGVGEGGQCSWNYRCTLFTLVSLGLTDLARGHNSASGPTAPADSQKL/HL/DVHRVYLS*RNNSGSPARADNAPSQRFCNLGLRGLPISPSREALYGCN

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5852	1556	483	<p>A</p> <p>PPFQIMGEIKVSPDYNWFRGTPLKKIIVDDNDKIMSLYDAG            PSRIICPLIFLPVSGTADVFFQILALTGWQYVIALQYPPVM            DHLEFCDFGRKLLDHLQDKVHLFGASLGGFLAQFAEYTHKSP            RVHSLILCNFSFSDTSLFNQITWANSFWLMFAIMLKKIVLGNFSS            GPVDPMMADAI DFMVRLBSLQSSLASRLTLNQNQSYVEPHKI            RDIPVTIMDVFQDSALSTRAKEMMYLYPNARAHKLTKGNFPY            LCRSAEVMLYVQIALR/RHSMENPFRPLTHQMSVSPRSLRCRKA            ALASARRSSSVSLAVNDELTRCVLV/SVAAPVSRPFPGSSSS            PVLTVSGK</p>
5863	2714	249	<p>PFPSRSLPLAPREDTNGPLMFLCFLFLYFOLASAPSPCFQ            VNISQGTPLTSHGMAPGSLITVSCPOLYPSPASRLCKSSQMQ            TPGATRLSKAVCKVCECPAPVSFENQITVPLIGSVYVGGNVF            ECEDGFI\LRGSPVRCRPMGMDGHTAVCDNGAGHCNPNGISL            GP\VRTGPRFGHGDVKVYRCSNLVLTGSSERECCQGNVMSGTE            PICRQPSYSDPFDVAPALGTSFSLMLGATNPQTKTESLGRKI            QIQRSGLHLNLYLLDCSQS VSGND FLIFKESASLWDRIFSPFI            NVUSVAITFASPKVMSVLNDSNRDMEVSSILENANYKDHEN            GTGTNTAALNSVIVMNNOMRLLGMEITMAV\QIRHAILLLAT            DOK\SNMGSPKTAVERILREILNIQKENDYLDIYAIGVGLDQ            DRRLEHLSKSDGEBHAFILQDIALH\QFPHHMDVSLKLDITI            CQVHMSANASQDEPTFWHTIKESQET\CVGALSSDQVLT            AHCPCDNDGHSILMRVNDP\KSCMGKFLIZAKVLSFGPDFA            KINQIIA\EFYGD\DIALL\KLAKVKEM\STHCQSPCLP\CTM            \RANLGLRFTFKGSTR\DHENL\VMNKQSV\PAHF\VAL\N            GSKLEHLTLRMGVWTS\CCRLSP\KKKTM\FENLT\DVRE\VVTD            D\QFL\CS\GPORDESP\CK*E\SGGA\VFLERRFISAGGVWC            BWGL\YNP\CIASA\DKNSPKKGP\SAKVPPPTFR\DEHN\LTF            Q*SPWLQHPGMS*FLPLLANGHLSPPFACPAR\CRPLEHFLPS            EWATLETL</p>
5864	173	1013	<p>PLISVPQSLISLPQLLFCFPGQEPSPAPSPCLYSILNACSTMG            KLPSPSPSSPLACVLNKLKPLQTPDLKPKCLIFFPCNTAWPQY            KLEMSV\PMGTFRFSILGVLNDSCHGKNSVEVPQVAFPS            HWSLPSLCSQC\GLIPNLSSSPSCFG\PPPOVSP/TESFSS            MDSSDLPPPCAPARQAEPPGNSHLASAPPPYNPFTISPEHTWS            SLQFHSVTSPFPAPQOFTLKVAGAKGIVKSPSLSQIR*RL            GFSFSNIKIQPSHLLWQCP</p>
5865	568	1684	<p>CLSPRWGSEWAGHTIVGCIFFPKATISHPRKGNLYLCVCMTC            LSVCCVQVQSGWICV/CVSMCAVSLCTC\ICRCISMYTREHAC            ACIRV*VIMQMS/VCTCVSTCIDVRVCNIVCYVMCLCLGYA*AC            TCV*MCVCMHEFVCMC/VCACSVLL/CRGHICM/MCMSAYICI            /CVYCVLV\CVWACRPHSTCVMLVY*ACTCVMMH/CSTCTR/C            VHVCCMSHACBCLCVYLHICGCASTRN\WAGSARSRSCSLP            CNAIPGGLSLPGPSCPVEQLOGGPGQLQGRSGEARL\BGRHW            GSDPAVCSNCTVSPRGALCFEADPVPKQPPQWGRASFEBCRC            GGRBWCAPFLNGPQCCTCSIKPLAKKK</p>
5866	98	3197	<p>ARPEVAPFSLMSRQARWQDKDD\QSPREKNGKERRDLDDL            KKEVAMTEHONS\VEKVCCKYV\UCVQOLHSHKAGIILADCPNA            LTPPTTPPWVKFCRLPGGFSILLWIGAILCLPLAYIGQATED            DFGSDNLY\GIVLAUVIITGCFSSYQRAKSKIMESFQGNVPO            QALVIRBGRKQVNAZEVVVDGLVEIKGGDRVPADLRIISAHGC            KVNDSSILGSESPQTRSPDCIHE\NPLKTRNITFSSNPFVEGTA            RGVVVTGDRITVMGRIATLASGLEVGKTP\LAIBIEHFIOITGV            AVFLGVSFTLISLILGYTWLRAVIFLIGIVANVEGOLLATVTV            CLILITAKRMARKNCLVNLKAVETIGSTST\CSDKTGTLTQNRH            TVAHM\PDNIHEADTDEQSGTSFDSKSHTWALF*H/LGFC            NRPVFQGGQDNI PVLRDVGADGASEALLKCIISGSGVWLMRE            RNKKVAELPPNSNTKYQLS\IHEPTEHNDRIITLVWKGAFERILD            RGSITLLQKQKPLDEMMKAPN\NLLGLGSEVIGPCIVL            PERQPFQAFDQDDVNFIT\DNLCFVCLMSIGEPRAVPAVIG            KCRSAGIKVIMVTDGHEITAKAIAGVGII\PSGNTVTRDIAARL</p>

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5867	3	1485	NIPVSQVNRDAAKACVIRGTDLKQFISEQIDRILQMHETIVPAR TSPQOKLIIVGCGQRQGAIVAVTGDGVNDSPALKKADIGVANGI AGSDVSKQAADMILLDDNFASIVTGVSEGRLLIFENLKKSIAVTL TSNIPBITPFLFIMANIPFLPGTITITLCIDLGTMVPAISLAF BAESDIMKQRPNRPRTDKLVNERLISMAYGQIGMTQALGGPFS YFVILAENGFLPGLNVGIRLNVDDRTVNDLESYQQQWTVSQRX VVEFTCHTAFFVSIVVQWADILICTRNSVFQGGKMKLILF GLFSEETALAAFLSYCPGMVLAIRMYPLKPSNMWFCAPFYSLIFV YDEIRKLLLRNPFYGGVKEKTTY LPGRRKGGKGLZPPPAQALDKSNNKRAVPASKRAFSSVPKAP GPVXTLTERKNKKKIPWKSARVEXKCPASQPAVVFPAPE DFSQNKALQENLKKQSQAPKEKPLVISOVGGKKEKILQKFK ETSPQVKGSEMPAGKQDEASESGSVPSGSKHDEAPVPPTASGT EHNKKGTKERTNGDIVPERGDIHKKKRAK/QQQRPHRP/DI WFDVDPADEIAAIGPEAAKIAKQLQSGSGSVSLVKEQAFG GLTRALALDCBMVGVGPKGESMAARVSIVNGYKCVYKVPK TEPVTVRYTASGIRPENLKQGELEVVQKEVAEMKGRILVGH ALHNDLKVFLDHPKKIRDTQYKFPKQVKSGRPLRLSEK ILGLVOQAHCISQDAQAMRLVYVKEWESNARDRPLTA PDHCSDDA*QSCPAAAAAPLQKQCDQSGGQITSPQSGNSGETFS ESWQSGVWACY
5868	2122	833	LTAGASHITQDASQSTSAKYPAQAQNI/CVTNKRREDLADIWYIR AVTVYDKPASFPFKETPLDLQHLRFLMKLGSNHSPPRARSEDPV TERSAPTERDAGSGVLTRLRERPALVSSSTWTEDEFSILLAA LESRV*^T^MTLDGHNLPISVLCVITGKGPLREYYSRLIHQKHFOH IQVCTFWLAEADYFLLLAGSADLGVCIHTSSSGLDLPMKVVDMFG CCFLVCVAVNFKCLHLVKEHENGVLVEDSEELAQLQMLFSNFP DPAGKLNQFRINLRESQQLRWDESQVQTVLPLVMDT
5869	2122	833	LTAGASHITQDASQSTSAKYPAQAQNI/CVTNKRREDLADIWYIR AVTVYDKPASFPFKETPLDLQHLRFLMKLGSNHSPPRARSEDPV TERSAPTERDAGSGVLTRLRERPALVSSSTWTEDEFSILLAA LESRV*^T^MTLDGHNLPISVLCVITGKGPLREYYSRLIHQKHFOH IQVCTFWLAEADYFLLLAGSADLGVCIHTSSSGLDLPMKVVDMFG CCFLVCVAVNFKCLHLVKEHENGVLVEDSEELAQLQMLFSNFP DPAGKLNQFRINLRESQQLRWDESQVQTVLPLVMDT
5870	2122	833	LTAGASHITQDASQSTSAKYPAQAQNI/CVTNKRREDLADIWYIR AVTVYDKPASFPFKETPLDLQHLRFLMKLGSNHSPPRARSEDPV TERSAPTERDAGSGVLTRLRERPALVSSSTWTEDEFSILLAA LESRV*^T^MTLDGHNLPISVLCVITGKGPLREYYSRLIHQKHFOH IQVCTFWLAEADYFLLLAGSADLGVCIHTSSSGLDLPMKVVDMFG CCFLVCVAVNFKCLHLVKEHENGVLVEDSEELAQLQMLFSNFP DPAGKLNQFRINLRESQQLRWDESQVQTVLPLVMDT
5871	3	3465	FFCFEPLRLYSKTTGDRSAMAGAGLTAERVSXWVLEERRARTES VLKLL*LSLRLK*LEPIT*NGLLT*CSRLSVRFLKV/GSVYEP LKSINLEPRDNETLMDKLDHYIRVIXKSTLLLYQSPTTGLFPTKT QSGDQKAKIQDSLYCAGAWALALAYRRIDDDGRTHLEHSAI KOMBELCYMRQADKQVQKQDEPRTCLHSVFNHITQDELLS YEBKGLQINWASLLLYLVKMSYQGLQIINTDSEFTQOMLVF CVARVRYVPADPGVWGKRKGGKY*/SGSTLEHSEGVGLQNG L*^KQFNGFLPNQGCWSVSFVVDLAHNRNRQITCSLLPRESR SHNTDALLPCISYPA*ALDDEVLSQTLDKVVRKLGKQYFPR PLRDGYRTSLSDPNRCYYPKAEIKLFDGIECEPPIFFLYNMIDG VFRGNPKQVQEQDILLTPVLIHHTTSGGYPVVPKYTVADPVEZE KNNPGSQKRRPNSNOGRDGKFLWGQALYIIAKGLADELISPKOI DPQRYVPLKDQRNVSMRFSNQGPLENDLVHVALIAESQRLQV FLNTYGIQTQTPQOQVEPIOIMPQOELVKATLQGLINEKLGLSGR PDRPIGCLGTSKIYRILGKTVVCYPIIFDLSDQFMSQDVLLILD DINKALQTKQYWMHGRPLFLVLIREDNIGRSRNPILDM*AA LAKGLIKGVKVRDLRQTLGSAVVBGLDPLRISDTBELPEFS FEBELPKKSKVKQSSSTSPADLQGPVHISBWKVHTHEL QKLNDCSCLASQAILLGLLKRGGNFITTEGTVDHIERVRR

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			AGSQKLSVVRRAASLLSKVDSLAPSITNVLVQGVQLNAG HEEEVSNPLSPRVQNI IYKCNTHIDREAVTQQRVLHIGWI ISNNPRLPSGLTKIRIGWIIHAMEYELQIRGGKPALDLYQLSP SEVKQLLLDLQPOONGRCWLNRRQIDGSLNRTPTG FYDRVWQI LERTPNGIIVAGKHLPPQQLSDMTMYEMFSLVEDTLGNIDQ POYRQIVBLLMVVSVILSRNPELEFQDKVLDLRL/KZAFNEFQ KQSRLEKEIKQDDWTSFYNTFPLIGKRGTCSSLTAVNMILLEG RVKPNNDPCLIS
5872	68	665	VGVHWRVYVTKINSYSEKTSIGHRHCCFELDATQPKPTPTVFF NIADESSELOCI\SFLLPADK/PKWKMTVLLNTGEKVLGDK GPCFYRIIP/LQXGDDFT\HNGTGKSLSEEDENFI/LKE TAGVLSTANAGPTTNGSOFF\CTAKEDG\QHVVPKVKIDMS IVRALERSGSRNGTKSKKITAANGGL
5873	2240	566	REPPEGSGGGRTRARMPLPMSIALPELLSWAGGFQNASAR HHGLLASARQPGVCHYGTKLACCYVGRNSKGVATCEPCKFK GECVGNKRCFPGYTGKTCSDVNECGMKPRPQHRCVNTHGS YKCFCLSGHMLNPATCVNSRTCAMINOCYSCDEEGPQCLCP SSGLRLAPNGRDCLDIDECASGVICPVNRCVNTFGSYKCKH IGFELQYISCHYDCIDINECTMDSHTCSHEANCNTQGSFKCKC KQGTGNGGLRCSAIPENSVEKVLAPGTIKDRIKLLAHKNSMK KKAIVNTVTEPTPTPTKVNILQPNYEEISVGGNSHGG\KKG NEHEMKEGLEDEKREKALD\HRRERFPG\UVFFPKVNGAGE PGLILVORKALTSKLEHKADNTSVGSPNGAICDWKODRA EDDFDM\NPADR\DAWI\GFY\MAV\PLAGLQGHK\KDI\GRLLCLL PDLQPGSNFCLLDYRLAGDKVGLVFPVGNNSNALLANEKTTSE DEKWTGKIQLYQTDATKSIIFEAERGKIKTGELAVDGVLLVS GLCPSSLLSVDD
5874	2	3387	ACPELARRRRVRSLLRRKRGWLRARMSKQNNVAARRITQETFD AVLQEKAKRYHMDASGEAVSETLQKAODLLRAVPRSRABMYDD VHSDGRYSLSGVAHSRDAGRESLSRVFSGSPFRSSNPSISDD SYFKECGRDLFSHNSNRDQVIGHRKLGHRFSQDNKFPALRGSW EGDFGHPVSGESSMSQESYFGPSAVLQDPGSSRLIEKECLEKE\ SRDVPDMSQA\BA\DSVLGRS\SOQA\RGRAINVVDQEGSLLG KBTGQLLTAKGVQKGLVTLAWSTKILPTTARIPTKTGWTGI QKNTSPDVTGLTNGPTEDIG\PIQKPIPLGLDLMALPRKMS FDIIDKDVFSRPGISIIKWAGPHTIKDOKFSOLFQTT\FELEST ETCAKMLASFCKSLK\BHRDFCFPTTKLKHSAKLTVPVDNEFL RMLLDKGAVTKNCFEIIKPFDKYIMRLQDRLLKS\VTPLINAC NAYELSVKMKTLANPI\J\ALALETNLSLCKRSLALLQGTFSLAS SFRQKIL\AVGLQDIAPSAAFPNFBEDSTLFGREYIDHLKAHL VSSGCPQLQVKARPEPRMEEREKMIPTTKPEIQAKAPSSLSDAVP QRADHVRVGTIDQLVKRVIBGSLSPKBRLLKEDPAYVFLSDEN SLEYKYKLLAENQRMSENLRGADQKPTSDACAVRAMLYSRAV NRUKKKLLP\WQRGLLRAQ\LRG\WKAARA\TTGTQTLLEFLR APSLKHGGRAPGLS\QAKPSLEDRND\AAKO\CFELDPV\GSPSP QDELKSGSPSPFAGVDTSEAPQSPSPCSASIMDKMTG KLARVPVQVG\PEISBP\SI\ENSIDNPDMP\IWDQNSVAPK FY\AKKVPFLCPSICTFSSPHNL\HTQGDDT\GQESDVOLAE GKAFEDPFPRAELESPEVMPEEDEDDBGGGEAPA\PGSG GPSLEGSTPADGLGEA\AEDDL/ALGAPALFTGLLQVTCFPPG RGPSKSLKVGMIAPKRVCLIQEPKVHEPVRIAYDRPGRPKS KKKKPKDLDFQAQKL\TDK\NLGPO\MLQKWKKEHGLSG\CK GTR\SRSACTQQAANGSGWGLSPSTCSILPGSFTAINVSWGL IPVF
5875	296	1848	LAALGGLPLDWRLSRGPFREYLLGLSALSALCOAMREVSVCVRVA LEFSGSLFPAHICLGDVNDPTLNEVLVGDTSKGVSVYVNDSDRP WLTSCSGHMLTCVVGVDVNCNGKILLVAVASAGVPHLEFLTPAK VLDSQSHHILTIQEBQPFYFGHHPANTVWLSIDIDQDQCREL VYGYTDVRAVAFWEELGEBEHLITQGLVSLKXWMLSGQVLSI VTGLGLPLGLMWSDQKCAAYALLCTWKKD\GSPSPASBQPTDGS /SGDPS\CPRRGAAPDIWPFYQQRCHLSPWQHQT\SHQTESSSS

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			GLFALCTLDGTLKIMREMRADKLLNSVQVDHQLFALEKLDVTE NGHEVTVACANDGQTYIIDNRVTVVRFQVDENIRAFCAGLYACK RGRNSPCILVYVTFNQKIYVYVEVQLERMBTNLVKLELTKP/ST TACCRRSWANILTSL*LVPCFTKSTRTQTSHHSLVPQASRIPPS WTCLIAEGEFP*TPTLPPKQVFGSHCAAGSITKQ
5876	1122	224	HGLGVFPRKVGAAANPEQBERETQVAAMLKIKIDGHPHIFQYEV NPTRTSILHLSERNRVRJRDVYLVIEDLKQKASEYESRKYIQ DLLMEVNFSPANLSTSGSYLNALVDSVALETKDTSLASFIP AVWDTSOLFPTKSKSEETIKLEKEMITATLVKELQEDV KKAELHLSER/AKVDNRQW\DFLKASSEFTGICQAGBQL SBAQ\DAFSPVQSLVAITRENWPLKQQTPLK/KELESYLD LMP/N7SHCSK*RIEBAK/RELA/SEIHE/TERVS/NDEL
5877	2030	1907	GTGKMAASSSGEKEKERLOGGLGVAQNSTREIT/SALEDLEV LSRLEIMLAISRNLQKLGAEENQVLELLIHRDGFQRMKLA LNQGIHHEMQVLKEVEKRDS/DQQLQKQLKEAGILATAVYQ AKELKSIKARKGAISSEETIKYAHRISSANVACPITWVFGD PRPPTDLEMRSLGLQGMNFSNNGVHGLPGDLA/RKRIAR CPCSTVS/NGSQWTRC*INILLIQKSVCEL
5878	950	2113	GLWKCHQLOGPHITIRVQF*PTPQQQPG/VFVA/VIAGNRPNLY RMLRSLSAQGVSPQNTVTFIDGYIESFMDVVALFGLQIHTP IGIDNARVSHYKASLTATNLFPSAKFAVLEEDIDAVDFES FLSQSILHEEDDSL/CLSAWMD/CHTANDPALLYRVEVTPG LGW/LRSLYKEK/EPKWP/PEKLMWDMWDMR/EGRQRECI DPOVSSYHFGIVGLNNGY/PEAYFKKIKENTVPGVQLENDLSL KKEAYEVEVHRLSSAEVLDSKPCEDSFLEDTGHTYVAFIR NEKDDDF/TWTQLAKLHIWLDVGRNIRGLWR/PRKKNHPLVV GVPAFSPYVKKPPSVTP/IFLEPPFKREGAPGAPEQT
5879	3	981	RLTEAAAGSGSRAAGWAGSPYTLTLPSPTSPRCATWASSEDD GTNGGASEAGEDREAPGKRRRLGLATANLTYDIAMTAGWLVL ATAMRVFYMKOTHRGLYKSIQKTLKFPQTALLIIVHCLGIV PTVSIVTGQVQVSRIFMVWLITHSIKPLQNEBSVULFVAVTVT IRTYSPYTFSLDHLPLVFLKWARVNFILLYPVGVAGELLTYI AALPHVETKYMSEIRLANKYNVSDYTYFLITMAYIPLFPQL VYHMLQRKRLWAG/L*EKMIK*SLQTRCFPPQNNQDYLSPSF NNKIKQLCEISWIVWFLKI
5880	1138	1324	SLWCLVAGGLGAGSSQNFILQJGLILAKPREKRTTSALTACSA SVTSKGKSSSGMPPSAASDRDSVPVLP/PGPVQLPSGTGWLSD *KKKRGRCSS/WLSPQCHEREKEVILLRSMAGEARARASDVL CRSLANETHQLRRTLITATAMCQHLAKCLDERQHAQRNVGERSP DQSEHTDGHTSQSVIEKLGRENRLKQKVTHVEDLNAKQRYN ASRDEYVRLGHAQLRGLQIPHEPELMRKREISRLNQLSEKINDC ABVQRLAASRTARDAALBRVCMLEQQILAYDKDFMSERADRER AQSRITQSLERKVASLLHQVSNRQDSREPDAGRIHAGSKTAKYLA ADALELNVPGWRPGTGSQQPEPPAEGGHPGAQRGGDLQCPH CLQCFSDRGEELLRHVABCCQ
5881	26	441	GGTHPSPTAPRAKHLHMCTWRIELFVLAAMVGHIAQVQLLQSG SEVFKGASVWCVTSYKOTLT/KLSMHW/CAPGKLE/MGPPFD LQGVETIYVQKFGVRVGMTKSTSTETQ/AHLSLSLSESDVAH HICATTV
5882	2407	2216	SGCVEMLYSHSLRYNPMWISVQSAVAPDQALNSDGL/IASGE RTRRD*QLPEAGGPGIQLPQLGELDITSDSEFILDEVDG/VDLR HYSKQVRLQLQTRKSIDRY/QESSENTASLNQITACDAVLER MEUMIGAFQSDLSISSEIRTLQSGSMNIRLENRQAVRGKLG ELVDGLVVPVSALVTAILEAPVTEPRFLEQLQELDAKAANVREGE ARGTACADRVGLDRLRKAVTKIRRFILQKTYFRKPMYNYQ IPQTALLKRYFFYQFLNGENRATAKERDEYVETLSKIYLSYTR SYLGRIMKVOYERVAEKDDINGVEDTAKGFFSKPSLSRNTIF TLTGRGVSIPTELKAPLIVPHTAQMRORYFEALFRSQHVAL LONSREYIYICRFPVVSQPAADHLEFAVGRLELMTLKHDSY LADCYDAIAPLCIHIVLRFNIAAKDVPALDRWEQV/LALW

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			PFRELILMNVSQVSHSDPQRLGLDTRPHVITRRYAEFSSALV SINQTIPIFNERTMQLLQGLQVTVENFVLRAVAEFSRSRKLVLFI NNYDNMLGVLM\ E* BRAADDSKEVESFQQLNARTQRFIEELLS PPFGLVATVKEAALIRGQAERLRGEEARVTVQLIRGFGSSWKL SSVESLQDVNRSPTNFRNGTSIIQGLTQLIQ\LYHRFHRV\L SQQLRALPARAELINHHLMVELKKKPKNF
5883	2	1374	EPFGRFRFVAVBAGACAGACAGAGSCPGPPTVITLGSYASEG CERKKGRNGSLERRGMQAMGBEVLVLPALYESESESESESESE EBEEQVQNGSGVSLSVNKHGSLSTETELERAOVLQVLAEL ETRELAQHEDDSLELGLLEDERLASAQAEVFTKIQIQLQGG ETSLREETSLELWKESELEKEI EQLALQNSIQSLKMAEDS ATRESHDIASLQEDLCRMQNELEEMERIRGDYEMIASLEAME MKSESPSGSLGLSDYSGLQEELEQLERZYHFLNHEYRALQENS SLTQCLADESBERTORATERMLQSQLTSMSESQSEMDFLEP DFEMQLLQQLDRAEQLMHGMKNKQELCELEBLQHRQVSEB EQRRLQRELEKCAQNEVLRQFQTS\PSHPLPPIPPSPCLL*A LVVISALLMCMNAETSS
5884	4261	2522	GVLRASARLRVPLTGVRAEPEVGAEPAKVGAAEPEDEDEGR SRLRDCGDTYPSERLQPKGAMLVQQAIPAAIATAKRSAGVAVV FVAGDDEQSTQMAASWEDDKVTEASGNSFVAIKIDTKSBAICQF SUIFPVVCVSPSSPFIQDSGLPLEVIAGSVSADLVTRIHKVRQK HLLKSTSVANGSGSESVSYSGSAPEENITCSCQSPADUATKVE IPSTSDTSKATQGRAGKETSQEPGSCSQKPELVLEKKEKE RLTKLEBREEKKEEKEEKEEKEEKEEKEEKEEKEEKEEKEE ELTKRMLERENREKAEDRAARERIKQIALDRAARAARAFATKE EVEAAKAAALLAKQAMEVKSRYARERTVARQERLPDPSGF TMQPPSDAPLEBARQFAAQTVGNTGNFSLAINMFPREFTKEDY KKLLDLLELAPSAGVLLP/ALFINF*AGRPASIVHSSSGDIW TLGLTVLPFLAIWRLISNLFNSPPPTTSVTSSEPPNPAS SSKSEKREPVRKVLBKRGUDFKKEGKIYRLKTDQDGEENNTW NGNSTQCM
5885	900	467	AKGGRESRLSRSPITGPSKSPSGVRKCCQVRAJAEDEKDFLDV TIVPQIFLAVVLGVINGVLPRLGFLIAGPCLINAGVLVLYFSN YLQIDEEYSGQWELFKGEMTISFA/IVGSHDLHLHCHPL*LM VYSSQVLPQSKQBS
5886	86	1341	PPRGAALTKFQIPGVAPPSLQTKHSDRQKPAQSQPPSPGS GTFGLLSFRMVTXTNWLKKHFGVGYTNSDFELKTSLEPLKNG EVLLEALFLTVDPYMRVAARKRGDTMMGQVAKVVESEKVAL PKGTIVLASPGWTHSISDGKLEKLLTEWDTTLPISLALGTVG MFLGTAYFGLLEICGVKGFTVMNAJAGAVGSVVGIAKLKGC KVGAVGSDKVAVLQKLGFDVVFNKYTVESLEETLKASPDGY DCYDNNVGSEINTVIGQNKFGRIACGAISTYRTGLPGPGP PFEIGIYQELRMEAFVYTRWGDARQALKDLKWLVLPLPYFVI D*LQANTLVYKSMKSAKPSLEIYSRKLVSQ\KIQYKSYIIBGFE NBPAPFQSMGLKGDMLKATVKA
5887	1937	104	APRQSCCRNRCFCRGRPHKUSLGDEAAKSPAAFPGAIGLQLEB RDKCHPGQDGRQPLHRGSG/SESELSSRRGPGQLGLOGPFP PAPGLQSRITL/PVLCVCLDSKACDINCCDDPSVSDFSVFS ACSVFVTVQDSQFCSOKAVIYSNPTANPCORVLEFQDQDIPFI FCIHITN*NLIIYPLLQKY/LNENNPDTKMKSIGFTLNESY VSFTTKLDIPTAKYEGVPIQTSUSPLFPSSLSLCTQNDP AALPLNQAQVKTRKTNLEQCEIEALSMAFYSSPILRVPDSK KVPITVQSIIVISLKNLTIRREDTDLVLPVLNAGHFSLCNVV LEVKYSLTITDAGVTRTKADLSFVLGTVSSVYVLPQKFEIHFILQ ENTQVPLPSGNPGYVGLPLAAGFOPHKSGSIQTTNRYGGLTI LHSTEQDCIALGVRTPVLVGTVMQSGCKLRITLALPCQVQAO KVKSLWQQGFDDYVAPFGNSQGF/ADMLDWVPIDHTQTSFNK DSQCLPGALVIEVKWKYSGSLNPAKIVHYTANLISGSPFPAF SGNERTILISTAVTFVDVSAKAGFRAPAINARLEPFFFFFF V



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5888	375	2302	LLCRTLGVAMQRADSEQPSKRRPCDPSPTPSNTPSARADWSFG LELHPDYKTNQPEQVCSFLRRGGFEPSVLLKNIRENETIGALLP CLDESFPENLGVSSSLGERKQLLSYIQLRLVQIRVDITMKVINDEIH GHIELHPLLVRHIIIDTQFORLRYIKQLGGGYVFPQASINRPHF SLGVCLHAGCLVHALGEBQKPELQSLVLCVQIAGLCHDLGHS PFEMEDGRIFLAREPVKWHQGSVPMFELINSGSIKPVME QYGLIDREDICPIKEGIVGLSESPVDSLPWKERENKSLYE IVSNRNGIDVDKMDYFARCDHGLIQNNDFYKRFKARCRV DNELRICARDKGVNGLYDMPTFRSLHRRAYQHKVGNITDMIT DAFLKADDYIEITGAGGKKYRISTAIIDMEAYTKLDTNIFLRL LSTDFPKLKDAREILKQIEYRNLFFKYVGEGTQPTGQIKIKREDYVS LPEKVASAKPKVILDLVKLKADFIVDVINMDYMQEENPIDHVS FYCKTAPNRAIRITKNQVSQLLP\EKFAEQ\LRIVYCKKVDKRS LYA\ARQYFVQ\CADR\NFT\KPDGRCY*PPTP*HQQKQW\ NDSTSPKIDITRLDRLDKSRV\QLKEDDM
5889	1831	731	LPAAQGRPVTPARQAPQEGRSRDRDLDPYPPQVFPFPPDPVAT VTGGDTIGYSTAKHLARLGMHVI IAGNNDISKAKQVVSKEET LNDKET*VLLCCPGWLCLMNSDDPPCSASGAGTGVHHRFLKL PFIETI DLASWTSIRQVQKPKKKI FLVILINAGVMVMPQR KTRDQEPHGMILGHFLTNLLDTLSSSISGHSARVTVMS SATHYVABLMDLQSSACTSIHAAVAGKLANVLETHLQLL ABSGSHYTNVNDPVPVNTOLYKHWMTALAKLLGWLFLQQ DRGANTSIYAAVTPDELGVGGRYLYNKKETKSLAVTYNQLKQQ LNSKSCMTGLVDVL
5890	1322	200	FRGWSAAGRAVVPFACSRISASGPRRRPRAVRLQSGTEAACRS GRPDPRPASAAGHAGHERMSQRDTLVHLPAGGCGGTGAILCP LEVVKTRQLQSSSVTLYISEVQNTMAGASVNRVVSFGLHCLKV ILEKEGPRSLFRGLGNLVGVAPSAIYFAAYSNCCKELNDVFD PDSTQVHMSAAMAGFTATATNPIKLITRQL*/SQGTAGKR RMGAFECVRKVYQDGLKGFYRGMSSAYAGISETVHFVYIESI KQKLELYKTASTMENDEESVKEASDFVGMMLAATSKLVATTI AYPHEVVRKTLREBQTKYRSFPQTLSELLVQEGYGSGLYRGLTTH LVROIP\NTAINMATYELVVYLLG
5891	1322	200	FRGWSAAGRAVVPFACSRISASGPRRRPRAVRLQSGTEAACRS GRPDPRPASAAGHAGHERMSQRDTLVHLPAGGCGGTGAILCP LEVVKTRQLQSSSVTLYISEVQNTMAGASVNRVVSFGLHCLKV ILEKEGPRSLFRGLGNLVGVAPSAIYFAAYSNCCKELNDVFD PDSTQVHMSAAMAGFTATATNPIKLITRQL*/SQGTAGKR RMGAFECVRKVYQDGLKGFYRGMSSAYAGISETVHFVYIESI KQKLELYKTASTMENDEESVKEASDFVGMMLAATSKLVATTI AYPHEVVRKTLREBQTKYRSFPQTLSELLVQEGYGSGLYRGLTTH LVROIP\NTAINMATYELVVYLLG
5892	1764	379	VVLRVGRLSVNSVSSRTGWSAGHLCAMQSLQVVLGHLRQPA DSGMPPQAAPCLSGAPHASADVVVHORRTATCRAGRGQFKDT TPDELSAVMTAVLKDVLNLRPQLQDLCVGNLQPGAGAIMARI AQFLSDIPETVILSTVNRQCSGLQAVASAGIRNGSYDTIGMA CQVBSMLADRNKNTISRLMEKSRKADCLPMGITSRNVAER FQISREKQDPTFALASQKQAVASQKQKCFQARVPTVTHDDKG TKRSITVTQDQIRPSTMEGLAKLQAFKKISSTTAMGSSVS DGAATLILARSKARELGLPLGVLSYAVGVQPTDWIGIPAY AIPVALQKAGLTVSDVIDFEINEAFASQAAYCCEKRLPP*RG *TPLGASGDP*GHFLGLHMGVQVITLAQ* SARGKAYRSGC PCAIGSWNGSLPVFFYPMGT
5893	3	1653	ILSKRRCKQAKTKELMAKGVAVIGAGVSLISLCCVDEGLEPT CFERTEIGQVNRFERVDEGRASYOSVVTNTSKEMSCDFDP NPDPPFNFLHNSKILYFRFLFAKFDLLKYIQPTVILSVRKC DFSSSQWVVTQSNKQKQSAFVDAVMVCSGHLPLHPLKSP GNERPKQYFHSRQYKHDQFEGKRLVIGMGNLQSDIAVELSK NAAQVFTSTHGTWMSRISSEDGYPDWSVPH\RFPSMLRNVLPR TAVKNMISQOMNRWPHNENGLBPQNKYIMKEPVLNDVPSRL COALVKVSTVKELTETSAIFBDGTYEINDVIFATGYSPSPFP

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5894	174	1673	<p>LEDLSLVKVENNMVSLYKYIFFAHLDKSTFIACIGLTQPLQSTIPPT            AKIQARWVTRVFKGLCSLPSERTMMMDIIKRNEKRIDLPESQS            QTLQTNVYDLDELALEIGAKPDPCLLFPDKPLAVRLVPGICN            SY*YRLVGGPGQWEGARNIPTQKRIILKPLKTRALKDSNSTSVS            FLKILGLLAVVVAFP/CQLQNS</p> <p>RTSPKRVLQNKESLLKGMATLVSAHSLAPLNKKKGLRVVRE            DHYSTWBOQFKLQNSKGLQCEPLCKQFQIRYBETTPGPREALS            RLKELCQQLQPEPTHKEHILELLVLEQFLIILPKELQARVQEH            HPERSEDVTVVLELQGLQDGETQQVDPQPKKQILVEMAPL            KOVQEQVRECEVTPEKKEGEBTHIENKLVTVDS CORVPS            SKIESTPMHNBGSMILRHCAKPEKTEYKESEREDQSTIQLD            LIETHASTHTGKLCESDVCOSSSLTGHKRVLS*ERKVTC/VGV            LGKAFQRSSHLVRHQIHLQEOPTQCNCQKVFSQAGLLEHLR            IHTGEKPYLICHOHGNFRSSHLNRHRIHSQEPCECKECCGKT            FSQALLLTHQRISHSKSHCKNECGKA/SLTSDLRHRIHTG            EKPPKCNICQKAPRLNISHLAQFVRIHNEKPKVQSCGEGAFQR            SGLFQHQRVHHKDKLA</p>
5895	2967	86	<p>HPSLLGAIPIFYPPSPSPFPPLLYLFWNSHRKSRHFINQRGITGE            MRLPVSDGVPGCLPVLAAGARGARAEVLIS*VSPEDCVVPLT            RPKVPVLQDLSGNLYFSTSAICRYFF/LLSGWEQDDLTNQWLEW            EATELQPTLSAALYLL/VVQGGK/EDVLSVRRTLTHIDHSL            RQ/WCFPLAGEESLADVLWMLGALPYLLDRAVLPBLSALHSH            FQTLSTQLEPQQAARWLVKQGVLAIAVYLLQKQSPESA            EOKGLSPIEPEEELATSEESIANAATVAWEGKLESLPLRPQ            NPVLVAGERNVLTLSALPVNNVPHLGNIGCVLSADVPRYS            RLROWNTLYLCGTDEYGTATETKAL/REGLTQETCDKYHIIHA            DIY/RWFNLSFDIFGRITTPQO/TKIT/QDIFQQLKRGFVLQD            TVBQLRCEHCARF/LADRFVGVCPFCGVEBARGQCDCKGKLI            NAVELEKPKQCKVCRSCPVOSSQHLFLLPEKLEKLEWLGRTL            PGSDWTPNAQITPFGFRWPSKPRNQ*TRDLK/WGNEGTP*E            GFEDEK/VFYVWFDTIGYLSITANYTDQMERW/KNPEQVDLYQ            FM/AKDNVPPHSLVFPSSALGABDNYTL/VSHLIATEYLNVEDG            K/PSKSRGVGVFRDM/AHDTGIPPDISRYFL/LYIRPEGK/DSA            FSWTDLKKRNS/ELLANLGNFIRAGMPFVSKFPG/VVZBHV            LTPDQRLLA/HVTELEGHYHQ/LEEKVIRDALRSLTIS/RH            QMYTI/QVNEPW/KRIKSGEADQRAQGTVGLAVNIALGLSVML            QPMPTVSATIQAOQLCPPPACSILLTNFLCTLPAGHQITGTVSP            LFOKLENDQIESLRQRFGGGQAKTSPKPAVETVTTAKPQOIQ            LMDEVTKQGNIVRELKQKADIONVAARVAKLLDLKQLLVAEG            KPPEAPGKKKK</p>
5896	2967	86	<p>HPSLLGAIPIFYPPSPSPFPPLLYLFWNSHRKSRHFINQRGITGE            MRLPVSDGVPGCLPVLAAGARGARAEVLIS*VSPEDCVVPLT            RPKVPVLQDLSGNLYFSTSAICRYFF/LLSGWEQDDLTNQWLEW            EATELQPTLSAALYLL/VVQGGK/EDVLSVRRTLTHIDHSL            RQ/WCFPLAGEESLADVLWMLGALPYLLDRAVLPBLSALHSH            FQTLSTQLEPQQAARWLVKQGVLAIAVYLLQKQSPESA            EOKGLSPIEPEEELATSEESIANAATVAWEGKLESLPLRPQ            NPVLVAGERNVLTLSALPVNNVPHLGNIGCVLSADVPRYS            RLROWNTLYLCGTDEYGTATETKAL/REGLTQETCDKYHIIHA            DIY/RWFNLSFDIFGRITTPQO/TKIT/QDIFQQLKRGFVLQD            TVBQLRCEHCARF/LADRFVGVCPFCGVEBARGQCDCKGKLI            NAVELEKPKQCKVCRSCPVOSSQHLFLLPEKLEKLEWLGRTL            PGSDWTPNAQITPFGFRWPSKPRNQ*TRDLK/WGNEGTP*E            GFEDEK/VFYVWFDTIGYLSITANYTDQMERW/KNPEQVDLYQ            FM/AKDNVPPHSLVFPSSALGABDNYTL/VSHLIATEYLNVEDG            K/PSKSRGVGVFRDM/AHDTGIPPDISRYFL/LYIRPEGK/DSA            FSWTDLKKRNS/ELLANLGNFIRAGMPFVSKFPG/VVZBHV            LTPDQRLLA/HVTELEGHYHQ/LEEKVIRDALRSLTIS/RH            QMYTI/QVNEPW/KRIKSGEADQRAQGTVGLAVNIALGLSVML            QPMPTVSATIQAOQLCPPPACSILLTNFLCTLPAGHQITGTVSP            LFOKLENDQIESLRQRFGGGQAKTSPKPAVETVTTAKPQOIQ</p>

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			LMDEVTKQGNIVRELKAKRADKNVAAEVAKLKLLKKQLAVAEK KPEAPEKGGKKK
5897	2967	86	<p>HPSLLGATIPFYPPSSPPWPPPLYLFNSHKSRRFINQRTIHE MRLFVSDGVPGLPVLAAAGRARARAEVLISVGPEDCVVPFLT RPKVPVLQDLSGNLYPSTSAICRYFF\LLSGEQDDL TNQMLEW EATELQPTLSAALYYL\VVQKKG\EDVLSGVRRTLTHIDHSLS RQ\NCPFLAGETESLADIVLWGLYPLLQDPAYLPEELSAHSW FOTLSTQ\EPQQR\AARRIVLKQ\QGVLAALR\PYLQKQCPQSPA EGKQLSPTEPEEELATLSEELAMAVTANKEGLSPLPRLPQQ NPVLPVAGERWVLTLSALPVMNVVPMLENTICQVLSADVPARYS RLRQWNTLYLCOTDEVGTATETKAL\EBGLTPQBI CDKY:II IHA DIY\RMFNI SFDPIDRTTPQO\CKT\QDIPQOLLKRGVFLQD TVBQLRCEHCARF\LA DRFVGVGCPGCGYEAGDQDCCKGKLI NAVELKKPCKVCRCSPVQSSQHLFLDLFKLEKRLBNWGRTL PGSDWTPNAQFITPFGFREWPKPRNQ*TRDLK\WGNPPT*E GFEDK\VFYVMPDATIGYLSITANYTQDQWRW\KNPQVDLYQ FM\AKDNVPPHSLVFPSSALGAEDNYTL\VSHLATEYLVNVEDG K\FSKSRGVGVRDM\AHDGTIPDPSRFLYL\LYIRPEBK\DSA FSWTDLLKNNK\ELLNMLGNFINRA\GMFVSKFFQO\YVPEMV LTPDDQRLLA\HVTLQLQHYHQ\LLEKVRIRDALRSILTIS\RH GQYIT\QVNSPWA\KRLKGSADRGRASTVGLAVNIALLSVWL QPTMPVTSART\QAGQLPVPACSLILTNFCLTEPEEGIGTVSP LPQKLENDQISLRQFPGGCAKTSKPAVIVTITVTKPQGIQA LMDEVTKQGNIVRELKAKRADKNVAAEVAKLKLLKKQLAVAEK KPEAPEKGGKKK</p>
5898	2967	86	<p>HPSLLGATIPFYPPSSPPWPPPLYLFNSHKSRRFINQRTIHE MRLFVSDGVPGLPVLAAAGRARARAEVLISVGPEDCVVPFLT RPKVPVLQDLSGNLYPSTSAICRYFF\LLSGEQDDL TNQMLEW EATELQPTLSAALYYL\VVQKKG\EDVLSGVRRTLTHIDHSLS RQ\NCPFLAGETESLADIVLWGLYPLLQDPAYLPEELSAHSW FOTLSTQ\EPQQR\AARRIVLKQ\QGVLAALR\PYLQKQCPQSPA EGKQLSPTEPEEELATLSEELAMAVTANKEGLSPLPRLPQQ NPVLPVAGERWVLTLSALPVMNVVPMLENTICQVLSADVPARYS RLRQWNTLYLCOTDEVGTATETKAL\EBGLTPQBI CDKY:II IHA DIY\RMFNI SFDPIDRTTPQO\CKT\QDIPQOLLKRGVFLQD TVBQLRCEHCARF\LA DRFVGVGCPGCGYEAGDQDCCKGKLI NAVELKKPCKVCRCSPVQSSQHLFLDLFKLEKRLBNWGRTL PGSDWTPNAQFITPFGFREWPKPRNQ*TRDLK\WGNPPT*E GFEDK\VFYVMPDATIGYLSITANYTQDQWRW\KNPQVDLYQ FM\AKDNVPPHSLVFPSSALGAEDNYTL\VSHLATEYLVNVEDG K\FSKSRGVGVRDM\AHDGTIPDPSRFLYL\LYIRPEBK\DSA FSWTDLLKNNK\ELLNMLGNFINRA\GMFVSKFFQO\YVPEMV LTPDDQRLLA\HVTLQLQHYHQ\LLEKVRIRDALRSILTIS\RH GQYIT\QVNSPWA\KRLKGSADRGRASTVGLAVNIALLSVWL QPTMPVTSART\QAGQLPVPACSLILTNFCLTEPEEGIGTVSP LPQKLENDQISLRQFPGGCAKTSKPAVIVTITVTKPQGIQA LMDEVTKQGNIVRELKAKRADKNVAAEVAKLKLLKKQLAVAEK KPEAPEKGGKKK</p>
5899	326	1078	<p>NCPSKEPNVGRAPSLPSPLAAMALSDVDVKKQIKHMAPIEQ EANEKAEISIDAKAEENFIEKGRIVQTRLKIMEYYEKKKKKIE QKKIK\MSMTNRQARKLV\RA RNDLISDLSAEKRLSRIVEDP EYVQGLDLKVLQGLRLLEPVMIVRCRP\QDLLEVAJAVOKAI PEYMTISQKHVQ\QIDKEA*LA VECSEVVEVYSGNCR\KVS N\TLESRLDSAKQMPEIRMALPGANTNKKFFI</p>
5900	64	1409	<p>KALSRDSCLEFCITCGVSSHDLQWYHSHLSRLQDLK GGVYIPALPQPNFKSLPLPLAVHMTASKSLTCAQCCHDEHPEL KMTAMVYVPTVWLRDHCDSACYSNIXHRSLSLTASVLCIRP KTLRDLSTLFTMPDQVFKYDNLWLNKSSSEQKQKV-QPR LWNAEYQOQVPSVQOSPLETHBGLKPSSEVQKQKV-QPR VPT\QSHTEKLAERISLIRET\YQPMYVTSDFSREGTATYKLA LDRHDTTITVQEPQGI\QVFCIKHRTGGRTLLVDGFFAAEQVL</p>

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PCT/US00/34263

SEQ ID NO:	Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence	Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence	Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *Stop Codon, /-possible nucleotide deletion, \-possible nucleotide insertion)
5901	1	2121	OKAPERFLLSKSAI\KHRYIEDVGRCHQPHQWDMAGS*ISTHG /YKYLILIRYNNYDRAVINTVPYDVIRHWYTAHRTLTIELRRPS NEFWVKLKGRLVFLIDNRVHLGRSCPTGYRQLGCGYLTRDDVL NTAALLGLQA VALBQTSLSKMQAVGGAFAFRTGSEYICQCGAKYTSLSDFQTHL KTHLCTVLPKLTCPQCNKEFPNQESLLKHVTIHFMTISTYYICE SCQKCFSTVDDLQKHLDMHTTVFFRCTLCQRFVDSKYSIQIHL \AVGHSNEKKVYKCTSCNWDPRNETDLQHLVGHGHNLENQKGVHK CIPGSSPTEVELQCHITTHSKKYNKPCSAFAHAILLEKHL REKCVFSTKTPQCTNAGSDVQKGEVEVQLLTHSGESINSHL DGSREDVDSFEPWYGCDCGSAAYTETLLQNKQRLRHHTPQGS AIVKKKAEILKGNVKNVCNCRTPFSSNGLRE\GCTHLOPKVYFM CPIGGERFPSLLTLTEHKVTHSKSLDTGNCRICMPLQSEERFL BHCCMHFDLRNLSLTQFCVCMQTVTS\LELKHGTFRMQKTGN GSAVQTT\GRGHVQKLYKCAKCELFKSKQDIWKLIDNGLPYGL CAGCVNLKSGASPGINVPQTNR\GLQGNEN\SAIEGKGVGGL KTRCS*LATPKE*VLKVELPPE\KPFHROGVRPDSNLTOLTK QVSPMPRISPSQSDCKTYQCILQCMVFYNENDI\QVHVANH\ID ESLNHCKLQSQTFDS\DAKQLCLHSHFBSHGQITFKCPVCFTY FVQANQLQKHIPSANGQEDKIYDCTQCKQFF\QTGLQNHQTTQ HSS
5902	712	209	LKHNRRSPSIRCSIGSTSVSRMLTSLT\TLHL\ADUV*V*RRY IPLKPRQ*ED*MQSMHMAHNTLEAFEQCAMMPGMYTDTGT VEP\QTVRVETQGDQLLPHLFDLMI\YKFSDEFFPI\WGE EFSLSKHPQGETVKAITYSAMQVYNEENPEFVUIDI
	2106	735	DTGPSP\STTAPFSLRLSLFSPSPSYLLPGQFP\QGRGLTT PALFALSAPVGAASPMPSGLRLP\LLP\LLMLVLTPGRPAA GLSTCKTIDMLVKRERIEAIRGQILSKLRLASPPSGVEPPGP LPEAVLALYNSTRDRVAGESABEPSPEADYAKCVTVLVMVT HNEIYDKFQSTHSIYMFNTSELRAVPEPVLSRAELRLRL KIKVQHVLYQKYSNWSRYLSNRLAFSDSEWLSFDVTQVY RQMLSRGGEISGFLSAHSCBDSRDNTLQV\NGFTTGR\RGDI AT\TQNMNPEPLMAATPFLRAQHLQS\SRIGAL\DTNY\CFSP HGRGR\CLRC\WEC*HLIFRDL\QW\XTH\HE\PROYHAF\CL GPCPYTWELTOYKVLAL\QK\HKGP\ASAA\CCVQALE\ PLIVY\VGRRKPKVEGLSNMIVSCSKCS
5904	3	1126	MMEIRINAINTKKEQELIYERLKEEKTNNELSAISREKIDTW ALGNSZTEKAFRAISSKVPVDKVPSTLPEVLD\FEKFLQQTGG RQGAWDYDQHNFVUKNKHGKPTFMEVLEHLPGTQDEVCQ HKWYQKFLALSEERKESIQIWKTKQKREIRI\FLKEKADNTE VLFHNKQEDNQKQKBEQRKQKLAZEAWKQKSI\BMSMKCASOL KEESKEKKHQKBRQRFKLKLLLESYVQKQKBEFLRLEKEI REKAEKAEKRNMAHRSIPQRDLHLKLEKILDRQAKDEKSGO KQRKLAKIKEVENNVS RDPSSLV\NTHQRIGRTNQKDRTNRLW ATSYT*GYSNLTEKESHR
5905	287	2912	MSFPRFMRKEKTLRI\TGLADAMF\DKKKGRENW\AFAP DQSYFAMSQCHRTVLVWMSQCLQVLL\HGTAVNEN\SLRLER QNSQGDQKPKPREHIDCQDIVE\LAPOSVEIKQSGCNTEBH RFRPGQDQLLATGLMSGRIKIMDVTYTKLLNLVLDHTGVVZDL TFA\DGSLILVASGRDKTLRYVLD\RDGCV\MMKVLRHQHNVY\ SCAPSPDSM\CSVGASFAVVAJLV\LR\LCWHHSH\TATVLS WAREVASI\ALG\AT\TIG*ST\AFV\LGVLVYHR\CHWSMTFCF SFPLFFFPKVISPTVKYH\LLSKLIFQFYIGSL\SRINLM*SI WLSNGFVS\LFPGIL\SDSRDLRL\*PILKPVLIFF*K*CI\SVQK KKK\KRIALLOBERLS*DKPPSSIL*QTEVNRIL\TRAILHS* LLIFR*NCI*TSY*IIDPFYIQTYDGR*PGKNRMVKE*FIEM *LYYFKI\AFSPCNV*HPCCLPKPHIAVNL\FACSCIFSS*A QVQDSRL*TSY\LGKRCQWSNLLRLFLSYVFFKMLVSGKK REGL*YLTLFISVYKS*LVG\INGVQPS\PKMKL\YVFFL\T PKAT\PMNR\NRICMSALIN\LD\ENL\MTLS\IFPKLLI\YNA\ YNLE*I*QF*YMHCHVPL\CKSS*SYNCLFIAG\PL\NNMDKYTM